

BEST AVAILABLE COPY

17116

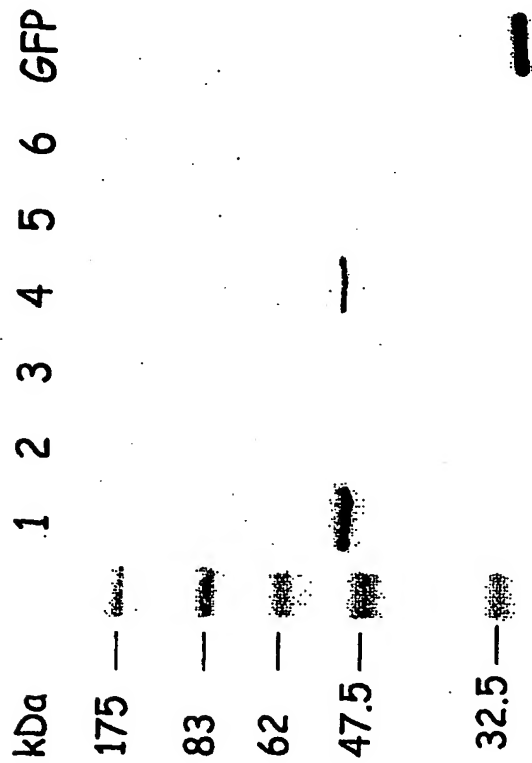


FIGURE 1

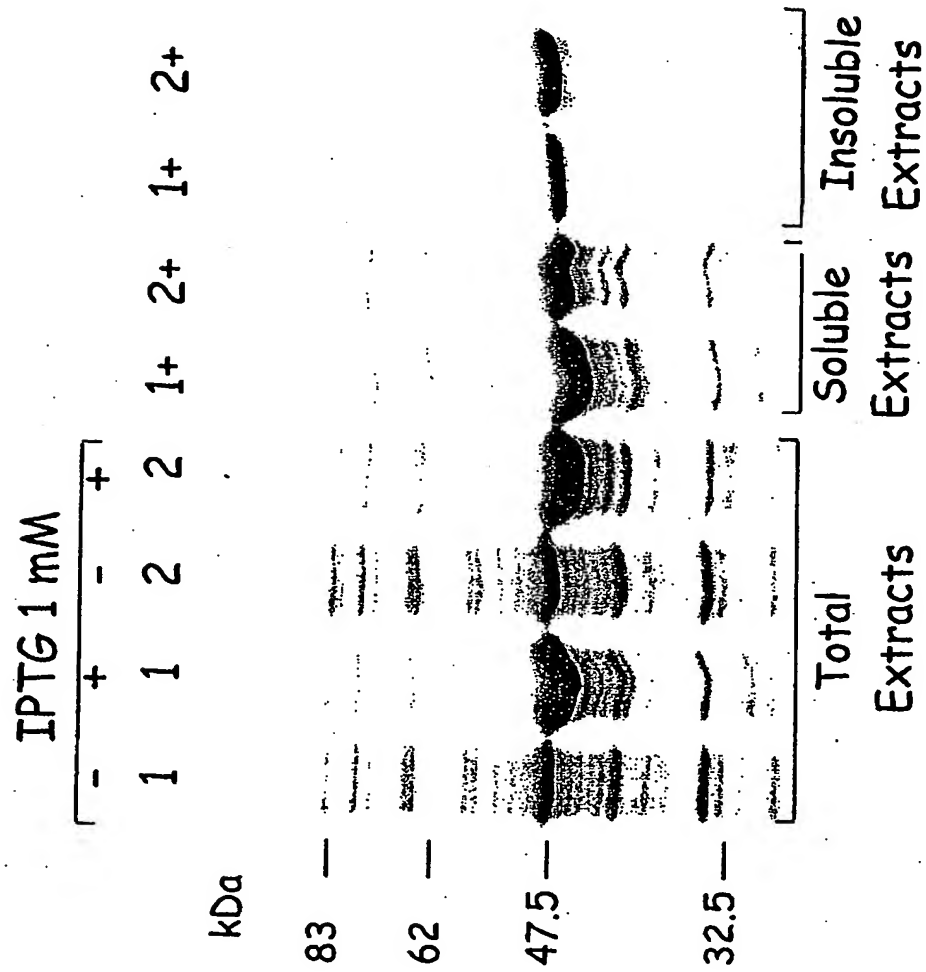


FIGURE 2

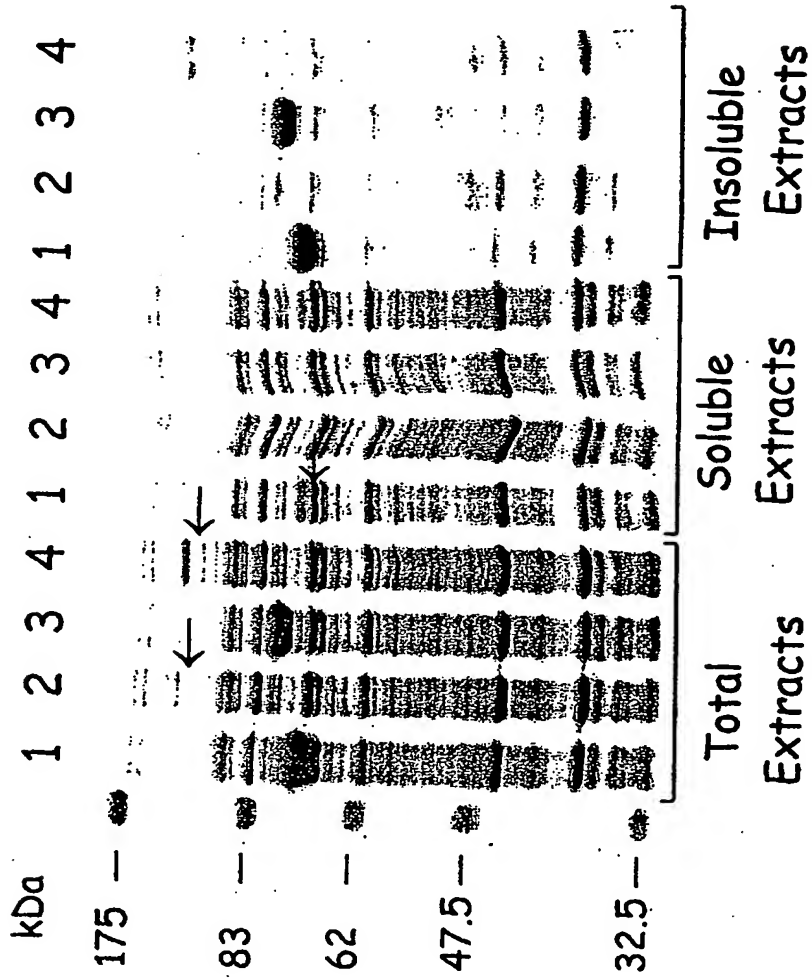


FIGURE 3

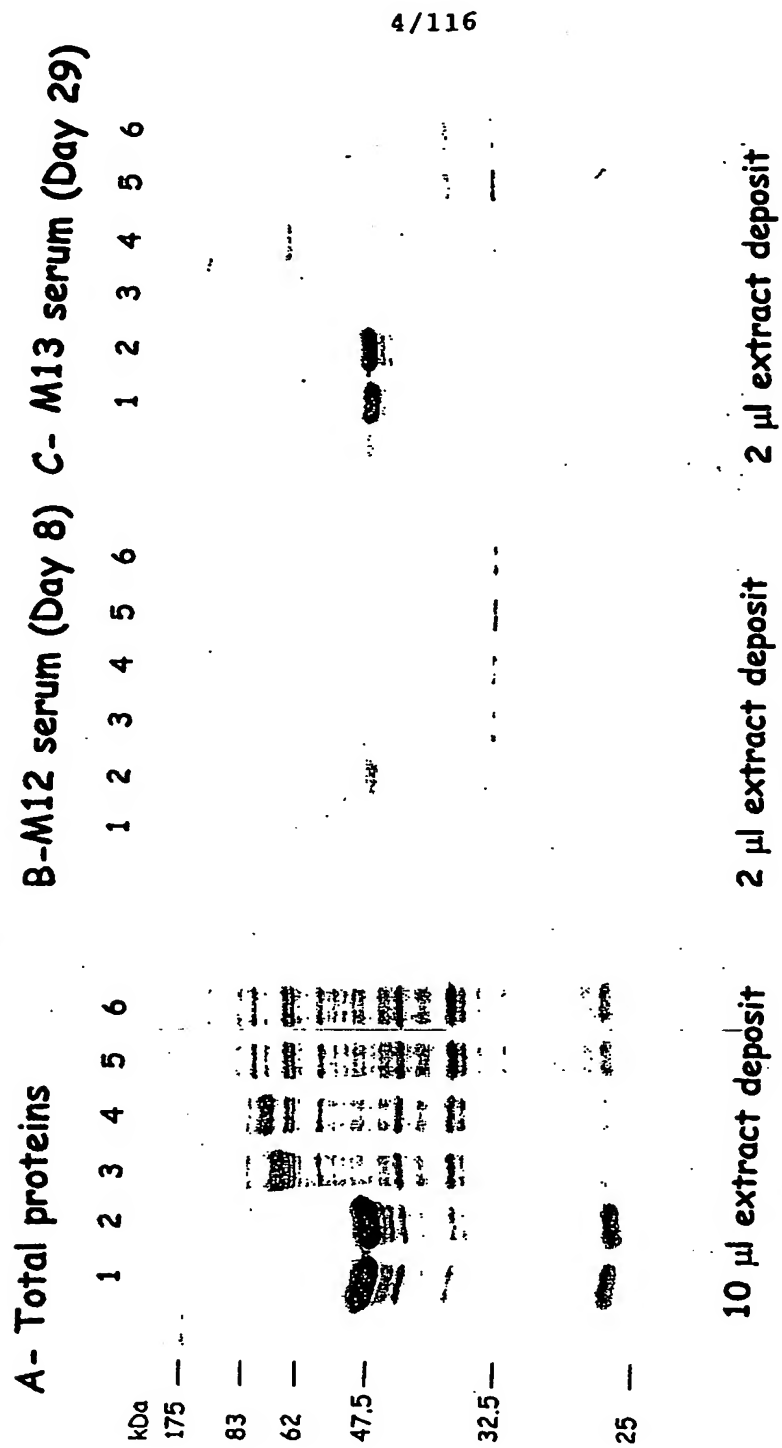


FIGURE 4

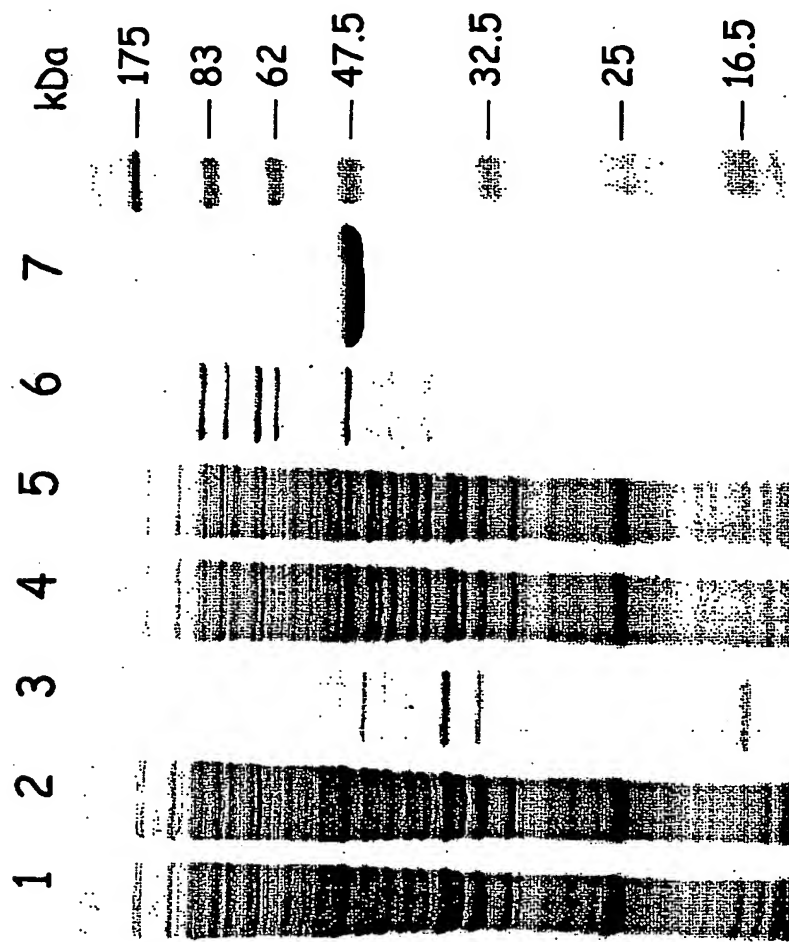


FIGURE 5

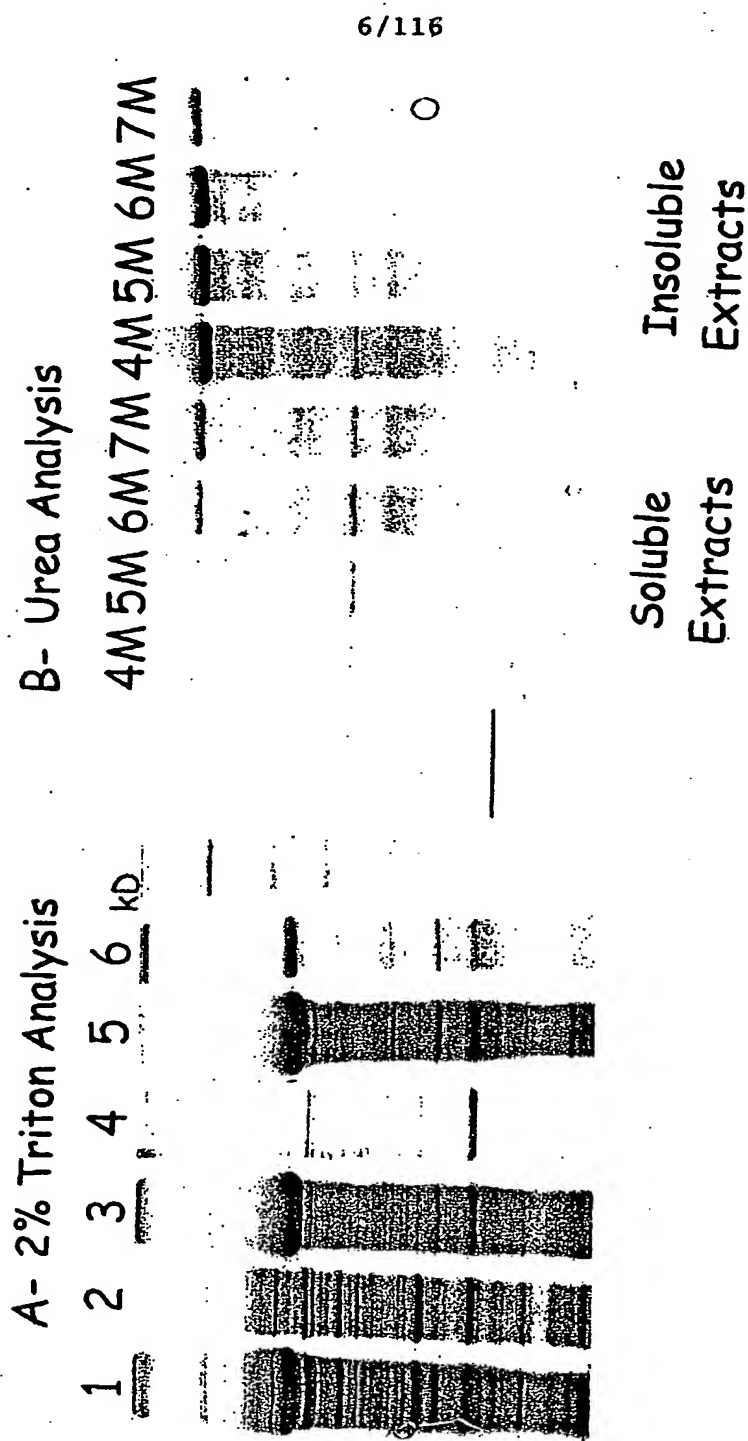


FIGURE 6

7/116

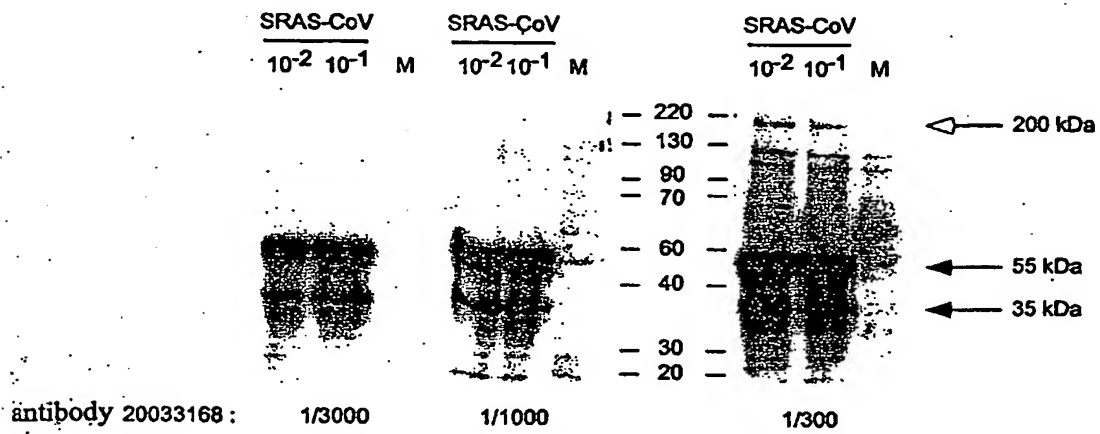


FIGURE 7

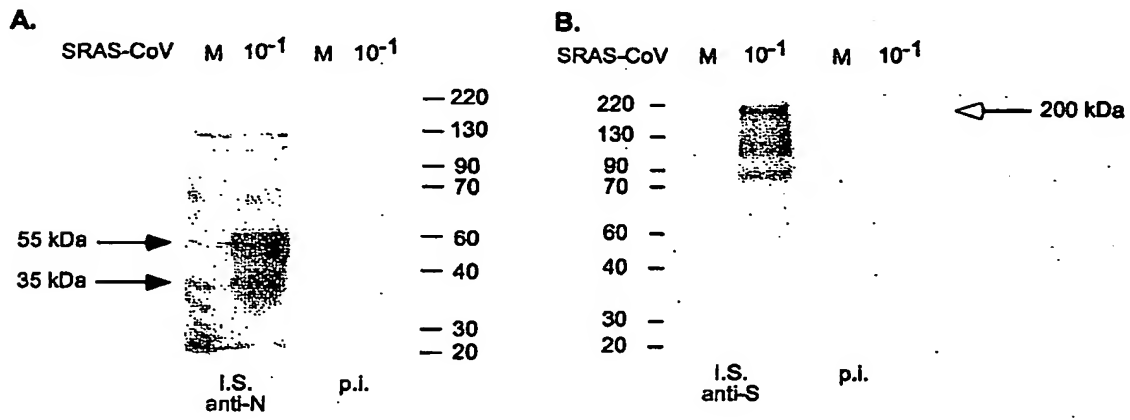
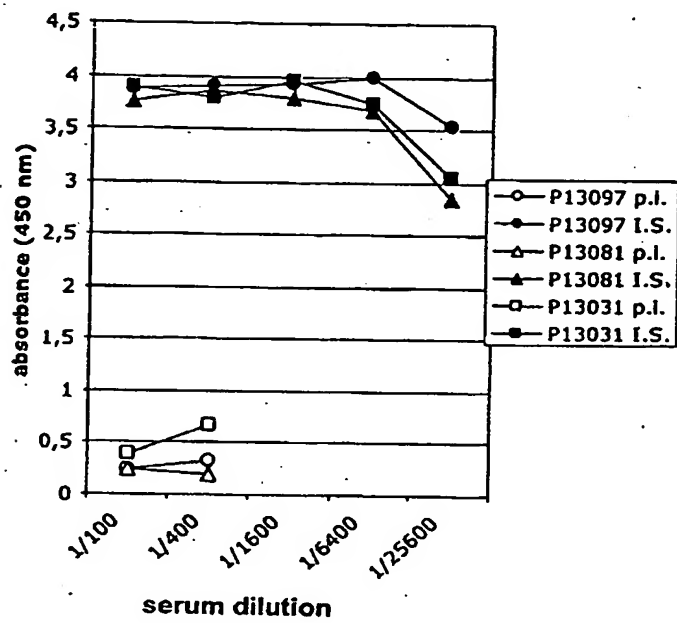


FIGURE 8

A



B

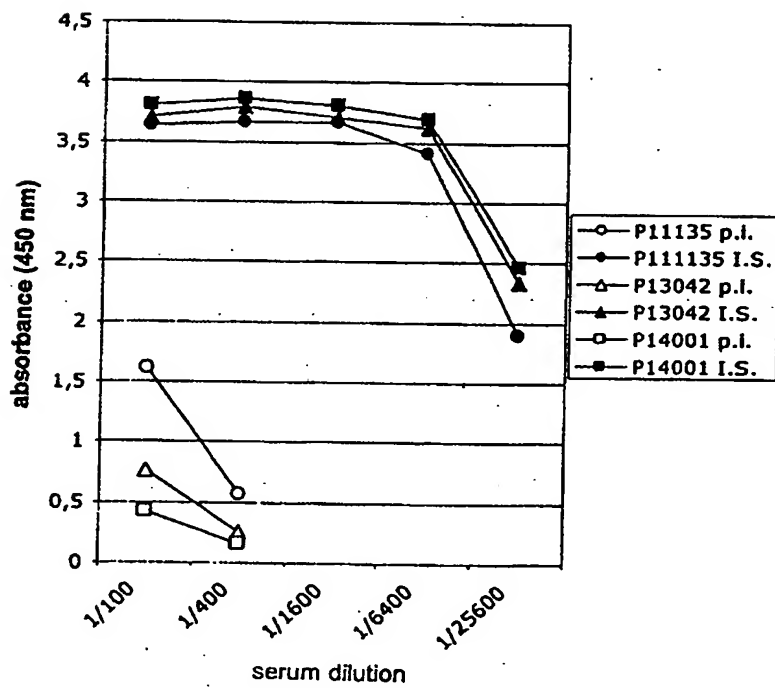


FIGURE 9

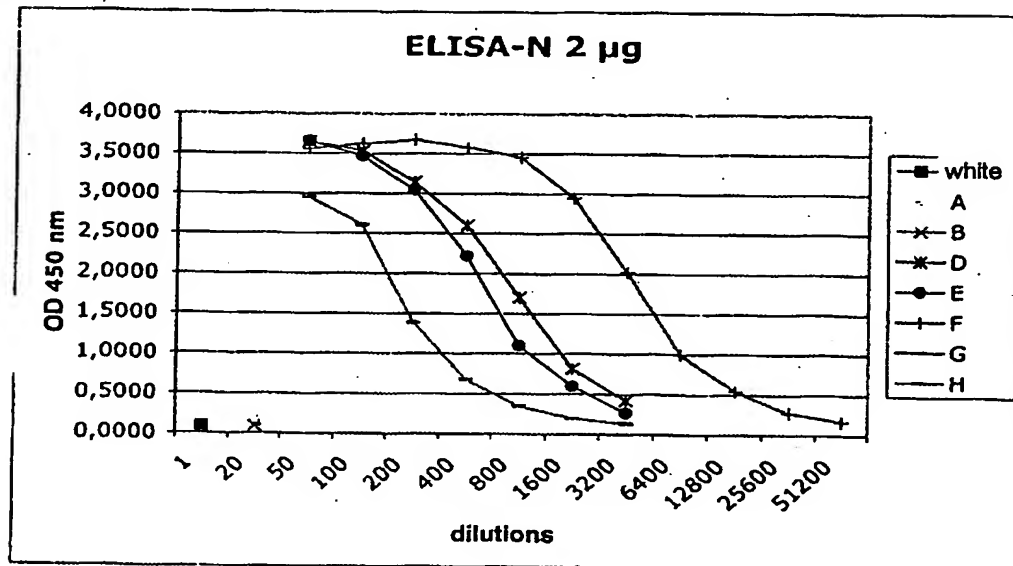
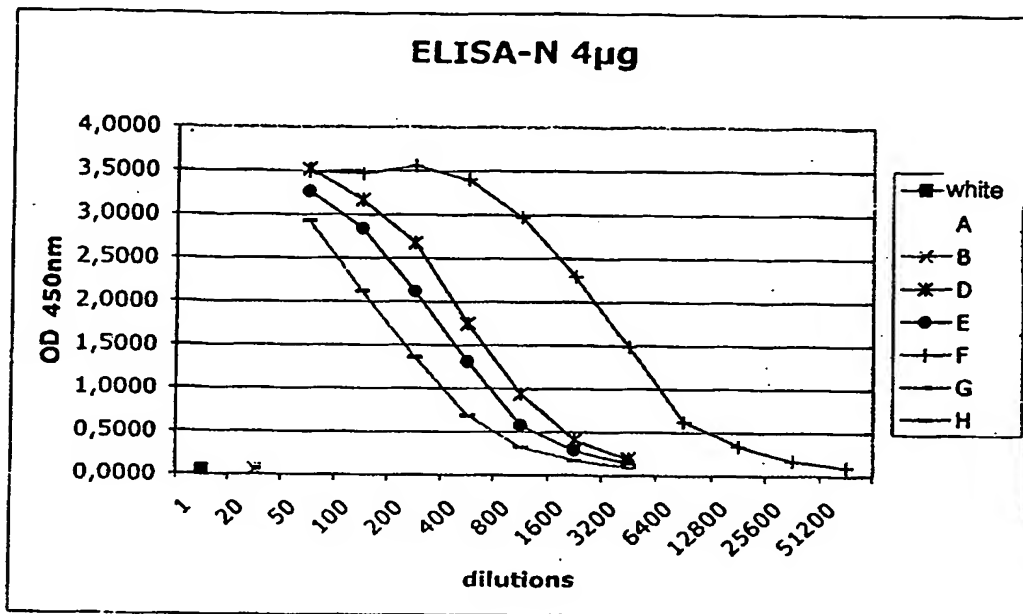


FIGURE 10a

11/116

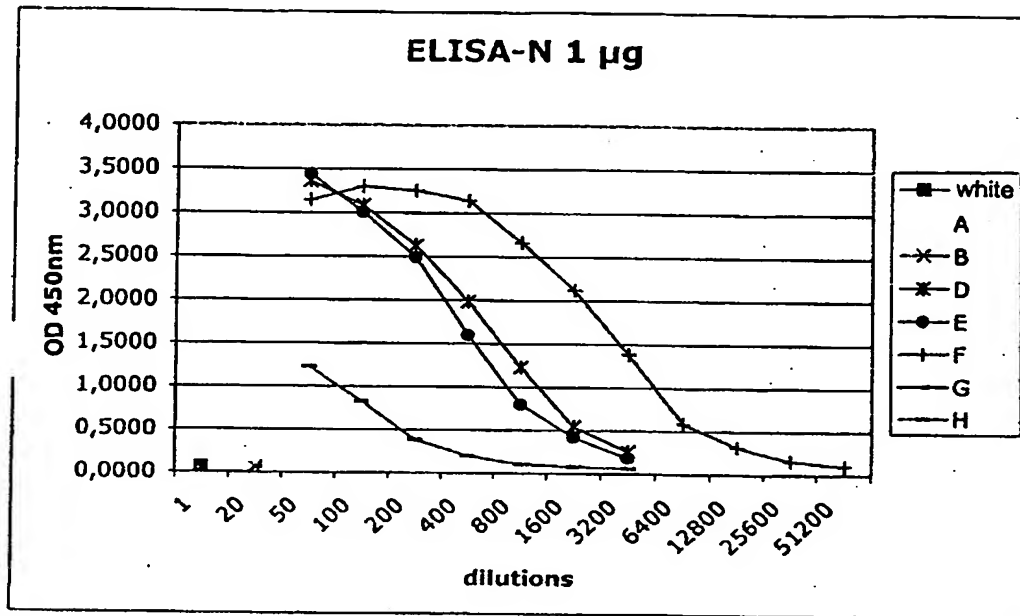


FIGURE 10b

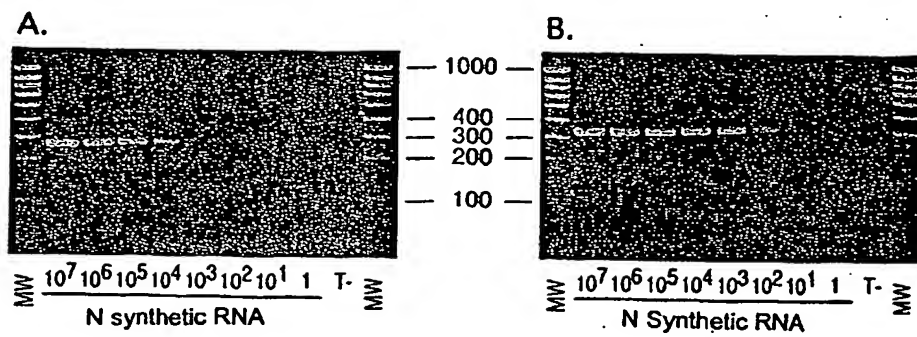


FIGURE 11

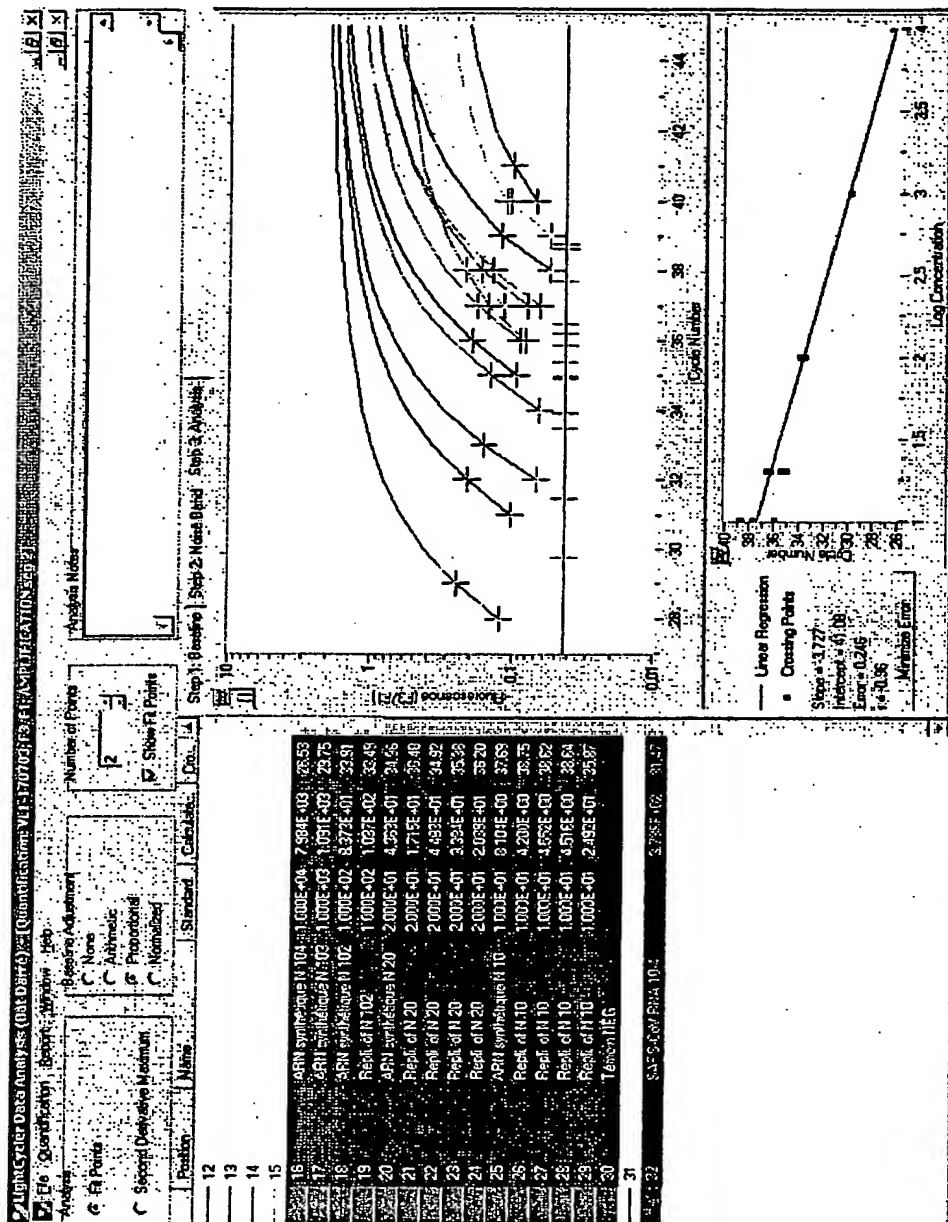


FIGURE 12

```

                >< ScrFI                >< XhoII
                >< MvaI                >< Sau3AI
                >< EcoRII                >< TthHB8I >< NdeII
                >< Ecl136I                >< TaqI    >< MflI
                >< DsaV                >< Sau3AI    >< MboI
                >< BstOI                >< NdeII    >< DpnII
                >< BstNI                >< MboI>< MnlI>< DpnI
                >< BsiLI                >< DpnII    >< BstYI
                >< BsaJI                >< DpnI    >< BspAI
                >< ApyI                >< BspAI    >< Bsp143I
                >< Bsp143I>< BglII
ATATTAGGTT TTTACCTACC CAGGAAAAGC CAACCAACCT CGATCTCTTG TAGATCTGTT CTCTAAACGA
  10          20          30          40          50          60          70
                >< VneI
                >< SphI
                >< SnaI
                >< RmaI
                >< PaeI >< SduI
                >< NspI >< NspII
                >< NspHI >< HgiAI
                >< NlaIII >< Bsp1286I
                >< MaeI >< BmyI
                >< ApaLI
                >< Alw44I
                >< Alw21I
>< Tru9I
>< MseI    >< BbvI
>< DraI    >< AluI    >< Fnu4HI    >< Alw21I
ACTTTAAAT CTGTGTAGCT GTCGCTCGGC TGCATGCCTA GTGCACCTAC GCAGTATAAA CAATAATAAA
  80          90          100          110          120          130          140
                >< SfcI
                >< PstI
                >< MnlI
                >< Ksp632I
                >< EarI
                >< Eam1104I
TTTTACTGTC GTTGACAAGA AACGAGTAAC TCGTCCCTCT TCTGCAGACT GCTTACGGTT TCGTCCGTGT
  150          160          170          180          190          200          210
                >< TthHB8I
                >< TaqI
                >< Sau3AI
                >< NdeII
                >< MboI
                >< DpnII
                >< DpnI
                >< BspAI
                >< Bsp143I
                >< StyI
                >< RmaI
                >< MaeI
                >< EcoT14I
                >< Eco130I
                >< BssT1I
                >< BsaJI
                >< BlnI
                >< AvrII
                >< ScrFI
                >< NciI
                >< MspI
                >< MaeIII
                >< HpaII
                >< HapII
                >< DsaV
                >< BcnI
TGCACTCGAT CATCAGCATA CCTAGGTTTC GTCCGGGTGT GACCGAAAGG TAAGATGGAG AGCCTTGTTTC
  220          230          240          250          260          270          280
                >< RmaI
                >< Esp3I >< MaeII
                >< BsmAI    >< MaeI
                >< Alw26I    >< BsmBI
                >< HindII
                >< HincII
                >< MaeII> < Eco57I
                >< AflIII> < DdeI
                >< Esp3I> >< MaeII
                >< BsmAI> >< MaeI
                >< Alw26I> >< BsmBI
TTGGTGTCAA CGAGAAAACA CACGTCCAAC TCAGTTTGCC TGTCCCTTCAG GTTAGAGACG TGCTAGTGCG
  290          300          310          320          330          340          350

```

FIGURE 13.1

15/116

```

>< Sau96I
  >< PssI
    >< Pali
    >< NspIV
    >< MnlI
    >< HaeIII
    >< EcoO109I
      >< DraII>< MboII >< PmlI
    >< MnlI >< Cfr13I >< PmaCI
    >< Ksp632I >< BsuRI > < MaeII
  >< HinfI >< BsiZI>< EcoNI >< Eco72I
    >< EarI >< BshI >< BslI >< BsaAI
  >< PleI >< Eam1104I>< AsuI >< BsiYI>< BbrPI >< MnlI
TGGCTTCGGG GACTCTGTGG AAGAGGCCCT ATCGGAGGCA CGTGAACACC TCAAAAATGG CACTTGTGGT
  360          370          380          390          400          410          420

                                >< Tru9I
                                >< SfaNI
>< RmaI >< RsaI >< Csp6I >< BspWI >< MseI
>< MaeI >< AluI >< AfaI >< AluI >< MaeII
CTAGTAGAGC TGGAAAAAGG CGTACTGCC CAGCTTGAAC AGCCCTATGT GTTCATTAAA CGTCTGATG
  430          440          450          460          470          480          490

    >< Pali
    >< HaeIII
  >< Tru9I >< GdiII >< RsaI
  >< MseI >< EaeI >< McrI ><
  >< Esp4I >< BsuRI >< Csp6I
  >< AflII >< BshI >< AluI >< BsmI BsiEI ><
CCTTAAGCAC CAATCACGGC CACAAGGTCG TTGAGCTGGT TGCAGAAATG GACGGCATTG AGTACGGTCG
  500          510          520          530          540          550          560

                                >< NspI
                                >< ScaI >< NspHI
                                >< RsaI >< NlaIII
                                >< Csp6I >< BslI
                                >< BsrI >< BsiYI
  >< AciI >< AfaI >< AflIII >< MunI >< MboII >< MboII
TAGCGGTATA ACGTGGGAG TACTCGTGCC ACATGTGGGC GAAACCCCAA TTGCATACCG CAATGTTCTT
  570          580          590          600          610          620          630

                                >< TthHB8I
                                >< TaqI
                                >< Sau3AI
                                >< NdeII
                                >< MboI
                                >< DpnII
                                >< DpnI
                                >< ClaI
                                >< Bsu15I
                                >< BspDI
                                >< BspAI
                                >< Bsp143I
                                >< Bsp106I
                                >< BsiXI >< MaeIII >
                                >< BscI>< SfaNI DdeI ><
                                >< BanII BfrI ><
CTTCGTAAGA ACGGTAATAA GGGAGCCGGT GGTCATAGCT ATGGCATCGA TCTAAAGTCT TATGACTTAG
  640          650          660          670          680          690          700

```

FIGURE 13.2

16/116

```

>> Sau3AI
>> NdeII
>> MboI
>> HphI
>> DpnII
>> BspAI
>> AlwI>> DpnI
>> AluI
>> Bsp143I
>> MboII
>> BsrI
>> DdeI
>> NlaIII
>> ApaLI
>> Alw44I
>> VneI
>> SnoI
>> NlaIII
>> ApaLI
>> Alw44I
GTGACGAGCT TGGCACTGAT CCCATTGAAG ATTATGAACA AAAGTGAAC ACTAAGCATG GCAGTGGTGC
710 720 730 740 750 760 770

>> SstI
>> SduI
>> SacI
>> NspII
>> MnlI
>> HgiAI
>> Eco24I
>> Ecl136II
>> Bsp1286I
>> BmyI
>> BanII
>> Alw21I
>> AluI
>> MaeIII
>> AccI
>> AsuI
>> TthHB8I
>> TaqI
>> SalI
>> RtrI
>> HindII
>> HincII
>> BsgI
>> BshI
>> Sau96I
>> Pali
>> NspIV
>> HaeIII
>> Cfr13I
>> BsuRI
>> Bsi2I
>> BshI
>> AsuI
ACTCCGTGAA CTCACCTCGTG AGCTCAATGG AGGTGCAGTC ACTCGCTATG TCGACAACAA TTTCTGTGGC
780 790 800 810 820 830 840

>> ThaI
>> ThaI
>> MvnI
>> MvnI
>> HinP1I
>> Hin6I
>> HhaI
>> CfoI
>> BstUI
>> BstUI
>> Bsp50I
>> Bsp50I
>> AccII
>> AccII
>> AccII
>> AccII
>> VneI
>> SnoI
>> SduI
>> NspII
>> HgiAI
>> Bsp1286I
>> BmyI
>> ApaLI
>> Alw44I
>> Alw21I
CCAGATGGGT ACCCTCTTGA TTGCATCAAA GATTTTCTCG CACGCGCGGG CAAGTCAATG TGCACTCTTT
850 860 870 880 890 900 910

>> TthHB8I
>> TthHB8I
>> TaqI
>> TaqI
>> MnlI
>> Ksp632I
>> HinfI>> PleI
>> Eam1104I
>> EarI
>> BbvI
>> AccI
>> Fnu4HI
>> NlaIII
>> NlaIII
>> EcoRII
>> DsaV
CCGAACAAC TGAATACATC GAGTCGAAGA GAGGTGTCTA CTGCTGCCGT GACCATGAGC ATGAAATTGC
920 930 940 950 960 970 980

>> TthHB8I
>> TaqI
>> SfuI
>> NspV>> Tru9I
>> LspI>> MseI
>> ScrFI
>> HinP1I

```

FIGURE 13.3

17/116

```

>< MvaI      >< Hin6I      >< SduI      >< Csp45I
>< Ecl136I   >< HhaI      >< NspII     >< BstBI
>< BstOI     >< HaeII     >< HgiAI     >< Bsp119I
>< BstNI     >< Eco47III   >< Bsp1286I  >< BsiCI
>< BsiLI     >< CfoI      >< BmyI      >< Bpu14I
>< ApyI >< DdeI >< Bsp143II >< AluI      >< Alw21I    >< AsuII
CTGGTTCAC T GAGCGCTCTG ATAAGAGCTA CGAGCACCAG ACACCCTTCG AAATTAAGAG TGCCAAGAAA
    990         1000         1010         1020         1030         1040         1050

                                >< Tru9I
                                >< MseI
                                >< BsmI
                                >< BscCI
                                >< MnlI
TTTGACACTT TCAAAGGGGA ATGCCCAAAG TTTGTGTTTC CTCTTAAGTC AAAAGTCAAA GTCATTCAAC
    1060         1070         1080         1090         1100         1110         1120

>< PmlI
>< PmaCI
>< MaeII
>< Eco72I
>< BsaAI
>< BbrPI
>< AflIII
>< NlaIII
>< RsaI
>< Bst1107I >< Csp6I
>< AccI      >< AfaI
CACGTGTTGA AAAGAAAAAG ACTGAGGGTT TCATGGGGCG TATACGCTCT GTGTACCCTG TTGCATCTCC
    1130         1140         1150         1160         1170         1180         1190

>< SfaNI
>< MaeIII
>< AccI
NlaIII ><
ACAGGAGTGT AACAAATATGC ACTTGCTAC CTTGATGAAA TGTAATCATT GCGATGAAGT TTCATGGCAG
    1200         1210         1220         1230         1240         1250         1260

                                >< SinI
                                >< Sau96I
                                PssI ><
                                >< Psp5II
                                >< PpuMI
                                >< NspIV
                                >< NspHII
                                >< Eco47I
                                >< DraII
                                >< Cfr13I
                                >< BsiZI
                                >< Bmel8I
                                >< AvaII
                                >< AsuI
>< MaeII
ACGTGCGACT TTCTGAAAGC CACTTGTGAA CATTGTGGCA CTGAAAATTT AGTTATTGAA GGACCTACTA
    1270         1280         1290         1300         1310         1320         1330

                                Van91I ><
                                SinI ><
                                Sau96I ><
                                PflMI ><
                                NspIV ><
                                NspHII >
                                Eco47I ><
                                Cfr13I ><
                                BslI ><
                                BsiZI ><
                                BsiYI ><
                                Bmel8I ><
                                AvaII ><
                                AsuI ><

>< RsaI
>< NspI
>< NlaIV
>< NlaIII
>< NspHI>< KpnI
>< Eco64I
>< Csp6I
>< BscBI
>< BanI
>< Asp718
>< AfaI
>< AccBII

```

FIGURE 13. 4

```

    >< Acc65I          >< SfcI          >< NlaIII          AccB7I ><
CATGTGGGTA CCTACCTACT AATGCTGTAG TGAAAATGCC ATGTCCTGCC TGTCAAGACC CAGAGATTGG
1340      1350      1360      1370      1380      1390      1400

                                >< TthHB8I
                                >< TaqI>< MnlI
                                >< HinfI
    >< DdeI
ACCTGAGCAT AGTGTTCAG ATTATCACAA CCACTCAAAC ATTGAACTC GACTCCGCAA GGGAGGTAGG
1410      1420      1430      1440      1450      1460      1470

                                >< P1eI    >< AciI
    >< RmaI
    >< MnlI
    >< MaeI
ACTAGATGTT TTGGAGGCTG TGTGTTTGCC TATGTTGGCT GCTATAATAA GCGTGCCTAC TGGGTTTCCTC
1480      1490      1500      1510      1520      1530      1540

                                NlaIV ><
                                >< BsrI
                                BscBI ><
                                >< BbvI
                                >< Fnu4HI
                                >< MaeIII
                                >< Eco3II
                                >< P1eI
                                >< HaeIII
                                >< BsuRI
                                >< BsrI
                                >< BsmAI
                                >< MnlI DpnI >
    >< RmaI
    >< MnlI
    >< MaeI
    > < DdeI
    >< BspWI
    >< BshI>< BglI
    >< Alw26I
GTGCTAGTGC TGATATTGGC TCAGGCCATA CTGGCATTAC TGGTGACAAT GTGGAGACCT TGAATGAGGA
1550      1560      1570      1580      1590      1600      1610

                                > < Tru9I
                                > < MseI
                                >< MaeII
                                >< Tru9I
                                >< HpaI
                                >< HindII
                                >< HinfI >< P1eI >< HincII
                                >< AlwI >< DdeI
                                >< AflIII >< MseI
                                >< Eam1104I
TCTCCTTGAG ATACTGAGTC GTGAACGTGT TAACATTAAC ATTGTTGGCG ATTTTCATTT GAATGAAGAG
1620      1630      1640      1650      1660      1670      1680

                                >< MboII
                                >< BstXI
                                >< SfaNI
                                >< P1eI ><
                                >< HinfI
GTTGCCATCA TTTTGGCATC TTTCTCTGCT TCTACAAGTG CCTTTATTGA CACTATAAAG AGTCTTGATT
1690      1700      1710      1720      1730      1740      1750

                                >< StyI
                                >< MaeIII
                                >< EcoT14I
                                >< Eco130I
                                >< P1eI
                                >< MaeIII
                                >< BssTII
                                >< BslI ><
                                >< HinfI>< AciI
                                >< BsaJI
                                >< BsiYI ><
ACAAGTCTTT CAAAACCATT GTTGAGTCCT GCGGTAAC TAAGTTACC AAGGGAAAGC CCGTAAAAGG
1760      1770      1780      1790      1800      1810      1820

                                >< Sau3AI
                                >< Van9II
                                >< NdeII
                                >< PflMI
                                >< MboI
                                >< DraIII
                                >< DpnII
                                >< BslI
                                >< DpnI >< Tru9I
                                >< BsiYI
                                >< BspAI >< MseI
                                >< BbvI
                                >< MnlI
                                >< Bsp143I
                                >< AccB7I
                                >< Fnu4HI ><

```

FIGURE 135

19/116

```

TGCTTGGAAAC ATTGGACAAC AGAGATCAGT TTAAACACCA CTGTGTGGTT TTCCCTCACA GGCTGCTGGT
 1830      1840      1850      1860      1870      1880      1890

      >< ThaI
      >< SfaNI
      >< MvnI
      >< HinPII
    >< HinPII
      >< Hin6I
    >< Hin6I
      >< HhaI
    >< Sau3AI    >< HhaI
    >< NdeII      >< CfoI
    >< MboI        >< CfoI
    >< DpnII       >< BstUI
      >< DpnI    >< BssHII
    >< BspAI      >< Bsp50I
      >< Bsp143I >< AccII
      >< Fnu4HI   >< BbvI
GTTATCAGAT CAATTTTGC GCGCACACTT GATGCAGCAA ACCACTCAAT TCCTGATTTC CAAAGAGCAG
 1900      1910      1920      1930      1940      1950      1960

      >< TthHB8I
      >< StyI
      >< NcoI
      >< HindII
      >< HincII
      >< HinfI
      >< EcoT14I
      >< Eco57I
      >< TaqI>< Ecol30I
    >< SalI >< DsaI
    >< RtrI >< BssT1I
      >< BsaHI
      >< BbiIII>< NlaIII
      >< AcyI >< HgaI
    >< MaeIII
      >< BbvI
      >< MaeII >< AccI>< BsaJI
CTGTCACCAT ACTTGATGGT ATTTCTGAAC AGTCATTACG TCTTGTCGAC GCCATGGTTT ATACTTCAGA
 1970      1980      1990      2000      2010      2020      2030

      >< RsaI
      >< Csp6I
    >< BspMI
      >< NdeI
      >< MaeIII >< BsrI >< AfaI >< DdeI
CCTGCTCACC AACAGTGTCA TTATTATGGC ATATGTAAGT GGTGGTCTTG TACAACAGAC TTCTCAGTGG
 2040      2050      2060      2070      2080      2090      2100

      >< StuI
      >< Pali
      >< HaeIII
      >< Ecol47I
    >< SduI
    >< NspII
    >< Bsp1286I
    >< BmyI
    >< DdeI
    >< BsuRI
    >< BshI
    >< AatI
    >< MnlI
    >< DdeI ><
    >< BfrI ><
TTGTCTAATC TTTTGGGCAC TACTGTTGAA AAACCTCAGGC CTATCTTTGA ATGGATTGAG GCGAAACTTA
 2110      2120      2130      2140      2150      2160      2170

      >< TfiI
      >< HinfI
      >< FokI
    >< SfaNI >< BsgI
    >< Tth111I ><
    >< AspI ><
GTGCAGGAGT TGAATTTCTC AAGGATGCTT GGGAGATTCT CAAATTTCTC ATTACAGGTG TTTTTCACAT
 2180      2190      2200      2210      2220      2230      2240

```

FIGURE 13.6

```

Tru9I >>
MseI >>
HpaI >
HindII >
HincII >
>< Eco57I
CGTCAAGGGT CAAATACAGG TTGCTTCAGA TAACATCAAG GATTGTGTAA AATGCTTCAT TGATGTTGTT
2250      2260      2270      2280      2290      2300      2310

>< Sau3AI
>< NdeII
>< MboI
> < MaeIII
>< FbaI
>< DpnII
>< DpnI
>< BspAI
>< Bsp143I
>< TthHB8I
>< TaqI
AACAAGGCAC TCGAAATGTG CATTGATCAA GTCACATATCG CTGGCGCAAA GTTGCGATCA CTCAACTTAG
2320      2330      2340      2350      2360      2370      2380

>< BspAI
>< BsiQI
>< BclI
>< HinPII
>< Hin6I
>< HhaI
>< CfoI
>< BspAI
>< BbsI
>< DpnIMboII ><
DdeI ><
>< Bsp143I
>< MboIBfrI ><
>< BspAI
>< BbsI
>< PvuII
>< Psp5I
>< NspBII
>< BsaAI
>< Fnu4HI ><
>< BbvI
> < Fnu4HI
>< HphI
>< DrdI
>< AccI
>< AluI
GTGAAGTCTT CATCGCTCAA AGCAAGGGAC TTTACCGTCA GTGTATACGT GGCAAGGAGC AGCTGCAACT
2390      2400      2410      2420      2430      2440      2450

>< Tru9I
>< NlaIV
>< MseI
>< MnlI
>< Esp4I
>< Eco64I
>< BscBI
>< NlaIII >< BanI
>< AflII
>< BbvI
>< AccBII
>< MaeIII
>< TfiI
>< HinfI
>< HphI
>< AfaI
ACTCATGCCT CTTAAGGCAC CAAAAGAAGT AACCTTTCTT GAAGGTGATT CACATGACAC AGTACTTACC
2460      2470      2480      2490      2500      2510      2520

> < XhoI
>< TthHB8I
>< TthHB8I>< TaqI
> < SlaI
> < Pae7I
> < NspIII
>< HphI >< HinfI
> < Eco88I
> < CcrI
>< Esp3I >< BsaHI
> < BcoI
>< BsmAI >< BblII
> < AvaI
>> HgaI
>< TaqI > < Ama87I>< BsmBI
>< Alw26I >< AclI
>< AluI
TCTGAGGAGG TTGTTCTCAA GAACGGTGAA CTCGAAGCAC TCGAGACGCC CGTTGATAGC TTCACAAATG
2530      2540      2550      2560      2570      2580      2590

```

FIGURE 13.7

21/116

```

>< Pali >< NlaIII
>< HaeIII >< MnlI
>< BsuRI >< DdeI >< Tru9I
>< BshI >< BfrI >< MseI
GAGCTATCGT TGGCACACCA GTCTGTGTAA ATGGCCTCAT GCTCTTAGAG ATTAAGGACA AAGAACAATA
2600      2610      2620      2630      2640      2650      2660

>< VneI
Tru9I ><
>< SnuI
>< SduI
>< NspII
MseI ><
>< HgiAI
BspI286I >< BslI ><
>< BsiYI ><
>< BmyI
>< ApaLI
>< Tru9I >< Alw44I
>< MseI >< Alw21I
CTGCGCATTG TCTCCTGGTT TACTGGCTAC AAACAATGTC TTTCGCTTAA AAGGGGGTGC ACCAATTAAA
2670      2680      2690      2700      2710      2720      2730

>< MaeIII >< MboII >< MaeIII >< TfiI
GGTGTAACTT TTGAGAAGA TACTGTTTGG GAAGTTCAAG GTTACAAGAA TGTGAGAATC ACATTTGAGC
2740      2750      2760      2770      2780      2790      2800

>< RsaI
>< NlaIV
MaeIII ><
>< MspI >< KpnI
>< HpaII
>< HapII
>< Eco64I
>< SduI
>< NspII >< TfiI >< BscBI
>< HgiAI >< Bani
>< BspI286I >< Asp718
>< BmyI >< HinfI >< AfaI
>< Alw21I >< AccBII
>< AccI >< Acc65I
TTGATGAACG TGTTGACAAA GTGCTTAATG AAAAGTGCTC TGTCTACACT GTTGAATCCG GTACCGAAGT
2810      2820      2830      2840      2850      2860      2870

>< Sau3AI
>< NdeII
>< MboI
>< DpnII
>< DpnI
>< BspAI
>< NspI
>< NspHI
>< NlaIII
>< MboII >< BspAI
>< BsrI >< BspI43I
>< DdeI >< MnlI >< AlwNI >< BbsI >< AlwNI
TACTGAGTTT GCATGTGTTG TAGCAGAGGC TGTGTGAAG ACTTTACAAC CAGTTTCTGA TCTCCTTACC
2880      2890      2900      2910      2920      2930      2940

>< Sau3AI
>< NdeII
>< MboI
>< DpnII
>< DpnI
>< BspAI

```

FIGURE 13.8

22/11 6

```

    << NlaIII>< Bsp143I          << AluI          << SfaNI
AACATGGGTA TTGATCTTGA TGAGTGGAGT GTAGCTACAT TCTACTTATT TGATGATGCT GGTGAAGAAA
  2950          2960          2970          2980          2990          3000          3010

                                << SfaNI
                                << MnlI
    << MboII          << GsuI          << Ksp632I          << MnlI
                                << BsaAI          << EarI          << MboII
    << HphI << MaeII>< BpmI          << MnlI << Eam1104I << MboII
ACTTTTCATC ACGTATGTAT TGTTCCTTTT ACCCTCCAGA TGAGGAAGAA GAGGACGATG CAGAGTGTGA
  3020          3030          3040          3050          3060          3070          3080

                                << RsaI
                                << RsaI
    << NlaIII
                                << MnlI          << FokI
                                << Csp6I          Eco31I ><
    << Csp6I          << MamI BsmAI ><
                                << AfaI          << BsiBI BsaI ><
    << MboII          << AfaI          << BsaB1Alw26I ><
GGAAGAAGAA ATTGATGAAA CCTGTGAACA TGAGTACGGT ACAGAGGATG ATTATCAAGG TCTCCCTCTG
  3090          3100          3110          3120          3130          3140          3150

    << NlaIV>< PvuII>< XmnI
    << Eco64I << Psp5I << TthHB8I
    << MnlI << DdeI << TaqI << MnlI << MboII
    << BscBI>< NspBII << MnlI << Ksp632I << MboII << MboII
    << BanI << MnlI << EarI << BsrI
    << AccB1I << AluI << Asp700I << Eam1104I << MboII>< BbsI
GAATTTGGTG CCTCAGCTGA AACAGTTCGA GTTGAGGAAG AAGAAGAGGA AGACTGGCTG GATGATACTA
  3160          3170          3180          3190          3200          3210          3220

                                << Tru9I
    << FokI          << MseI << Eco57I
    << DdeI          << BsrI>< MboII BsrI ><
CTGAGCAATC AGAGATTGAG CCAGAACCAG AACCTACACC TGAAGAACCA GTTAATCAGT TTAATGGTTA
  3230          3240          3250          3260          3270          3280          3290

    << Tru9I          << MnlI
    << MseI          << Tru9I << HindII>< Tru9I << DraIII
    << DraI          << MseI << HincII>< MseI << BspWI
TTTAAACTT ACTGACAATG TTGCCATTAA ATGTGTTGAC ATCGTTAAGG AGGCACAAAG TGCTAATCCT
  3300          3310          3320          3330          3340          3350          3360

                                << VneI
                                << SniI
                                << SduI
                                << NspII
                                << HgiAI
                                << Bsp1286I
                                << BmyI
                                << ApaLI
    << HphI          << NlaIII          << Alw44I
    << BbvI << Fnu4HI << BspMI << Alw21I
ATGGTGATTG TAAATGCTGC TAACATACAC CTGAAACATG GTGGTGGTGT AGCAGGTGCA CTCAACAAGG
  3370          3380          3390          3400          3410          3420          3430

                                << Sau96I
                                << Pali
                                << NspIV
                                << HaeIII
    << NlaIV          << Cfr13I

```

FIGURE 13.9

```

>< Eco64I
>< BscBI
>< Bani
>< AccBII>< NlaIII
CAACCAATGG TGCCATGCAA AAGGAGAGTG ATGATTACAT TAAGCTAAAT GGCCCTCTTA CAGTAGGAGG
3440 3450 3460 3470 3480 3490 3500

>< BsuRI
>< BsiZI
>< MseI >< BshI >< MnlI
>< AluI >< AsuI >< MnlI
>< SinI
>< Sau96I
>< NspIV
>< NspHI>< NspHII
>< Eco47I
>< CfrI3I
>< NlaIII >< BspMI
>< BsiZI
>< BmeI8I
>< AvaII MnlI ><
>< DdeI >< NspI>< AsuI FokI ><
GTCTTGTGTTG CTTTCTGGAC ATAATCTTGC TAAGAAGTGT CTGCATGTTG TTGGACCTAA CCTAAATGCA
3510 3520 3530 3540 3550 3560 3570

>< Tru9I
>< HphI> < MseI
>< Esp4I
>< AluI >< NdeI
>< AflIII>< Fnu4HI >< BbvI
GGTGAGGACA TCCAGCTTCT TAAGGCAGCA TATGAAAATT TCAATTCACA GGACATCTTA CTTGCACCAT
3580 3590 3600 3610 3620 3630 3640

RsaI ><
Csp6I ><
AfaI ><
>< Eco57I >< BcgI
TGTGTCAGC AGGCATATTT GGTGCTAAAC CACTTCAGTC TTTACAAGTG TGCGTGCAGA CGGTTCGTAC
3650 3660 3670 3680 3690 3700 3710

>< BsgI >< BspMI
>< BcgI/a >< AluI >< NlaIII
ACAGGTTTAT ATTGCAGTCA ATGACAAAGC TCTTTATGAG CAGGTTGTCA TGGATTATCT TGATAACCTG
3720 3730 3740 3750 3760 3770 3780

>< RmaI >< MnlI >< NlaIV >< TfiI >< MboII
>< MaeI >< Eco57I >< BscBI >< HinfI >< DdeI
AAGCCTAGAG TGGAAGCACC TAAACAAGAG GAGCCACCAA ACACAGAAGA TTCCAAAACCT GAGGAGAAAT
3790 3800 3810 3820 3830 3840 3850

>< Tru9I
>< StuI
>< Pali
>< MseI >< MnlI >< MaeIII
>< HaeIII >< EcoO65I
>< EcoI47I >< Eco9II
>< BsuRI BstXI ><
>< BshI >< BstPI
>< AatI >< BstEII
CTGTCGTACA GAAGCCTGTC GATGTGAAGC CAAAAATTAA GGCCTGCATT GATGAGGTTA CCACAACACT
3860 3870 3880 3890 3900 3910 3920

TfiI ><
NlaIII ><
HinfI ><
>< DdeI >< EcoRV >< HindIII

```

FIGURE 13.10

```

>< BsrI      >< MboII      >< MaeIII      >< Eco32I      >< AluI
GGAAGAACT AAGTTTCTTA CCAATAAGTT ACTCTTGTTC GCTGATATCA ATGGTAAGCT TTACCATGAT
3930      3940      3950      3960      3970      3980      3990

      >< NspI
      >< NspHI
      >< NlaIII
>< MnlI      >< SfaNI
      >< EcoNI
      >< MboII >< BslI      >< NlaIII
      >< DdeI      >< BfrI      >< HphI      >< BsiYI      >< FokI
TCTCAGAACA TGCTTAGAGG TGAAGATATG TCTTTCCTTG AGAAGGATGC ACCTTACATG GTAGGTGATG
4000      4010      4020      4030      4040      4050      4060

      >< SpeI
      >< RmaI
      >< MaeI      >< EcoRV>< HphI      >< SfaNI
      >< HphI      >< Eco32I      >< MnlI      >< DdeI
TTATCACTAG TGGTGATATC ACTTGTGTTG TAATACCCTC CAAAAAGGCT GGTGGCACTA CTGAGATGCT
4070      4080      4090      4100      4110      4120      4130

      >< ScrFI
      >< RsaI
      >< MvaI
      >< EcoRII
      >< Ecl136I
      >< DsaV
      >< Csp6I >< EcoNI
      >< BstOI
      >< BstNI
      >< BsiLI
      >< BsaJI
      >< BsaAI >< BslI
      >< MaeII>< ApyI
      >< AfaI >< BsiYI
>< AluI      >< BsrI      >< MboII
CTCAAGAGCT TTGAAGAAAG TGCCAGTTGA TGAGTATATA ACCACGTACC CTGGACAAGG ATGTGCTGGT
4140      4150      4160      4170      4180      4190      4200

      >< Tru9I
      >< MseI
      >< DdeI      >< Esp4I      >< RsaI
      >< MnlI      >< BspWI      >< Csp6I
      >< FokI      >< AluI      >< AflII      >< Eco57I >< AfaI
TATACACTTG AGGAAGCTAA GACTGCTCTT AAGAAATGCA AATCTGCATT TTATGTACTA CCTTCAGAAG
4210      4220      4230      4240      4250      4260      4270

      >< ScrFI
      >< MvaI
      >< EcoRII
      >< XmnI      >< Ecl136I      NlaIII ><
      >< Ksp632I >< RmaI      >< DsaV      Ksp632I ><
      >< EarI >< TfiI>< MboII >< BstOI      >< EarI
      >< Eam1104I >< MaeI      >< BstNI      Eam1104I ><
      >< DdeI >< HinfI      >< BsiLI      BsmAI ><
      >< BspWI      >< Asp700I      >< ApyI      Alw26I ><
CACCTAATGC TAAGGAAGAG ATTCTAGGAA CTGTATCCTG GAATTTGAGA GAAATGCTTG CTCATGCTGA
4280      4290      4300      4310      4320      4330      4340

      >< VspI      >< Zsp2I
      >< Tru9I      >< Ppu10I
      >< MseI      >< NsiI
      >< MboII      >< NlaIII      >< FokI
      >< Eco57I      >< Mph1103I >< FokI

```

FIGURE 13. 11

```

      >< AsnI      >< EcoT22I      >< BspWI
      >< AseI      >< AvaIII      >< BglI      >< MaeII
AGAGACAAGA AAATTAATGC CTATATGCAT GGATGTTAGA GCCATAATGG CAACCATCCA ACGTAAGTAT
  4350      4360      4370      4380      4390      4400      4410

      >< SfaNI
      >< Tru9I      > < HindII      >< TfiI      >< SpeI
      >< MseI      > < HincII>< MboII      >< RnaI
      >< MnlI      >< DrdI >< HinfI      >< MaeI
AAAGGAATTA AAATTCAAGA GGGCATCGTT GACTATGGTG TCCGATTCTT CTTTATACT AGTAAAGAGC
  4420      4430      4440      4450      4460      4470      4480

      >< MaeIII
      >< SfcI      >< Fnu4HI      >< MunI
      >< AluI      >< AluI      >< AciI      >< MaeIII ><
CTGTAGCTTC TATTATTACG AAGCTGAACT CTCTAAATGA GCCGCTTGTC ACAATGCCAA TTGGTTATGT
  4490      4500      4510      4520      4530      4540      4550

      >< Thai
      >< MvnI
      >< MboII
      >< HinpII
      >< HinpII
      >< HinfI
      >< HinfI
      >< HhaI
      >< HhaI
      >< Tru9I
      >< NlaIII      >< Fnu4HI
      >< MseI      >< CfoI
      >< MnlI      >< CfoI
      >< Ksp632I      >< BstUI
      >< EarI      >< BssHII>< BspWI      >< Tru9I
      >< Eam1104I      >< Bsp50I      >< MseI
      >< BbvI      >< AccII      >< AluI      >< HphI ><
GACACATGGT TTTAATCTTG AAGAGGCTGC GCGCTGTATG CGTTCTCTTA AAGCTCCTGC CGTAGTGTCA
  4560      4570      4580      4590      4600      4610      4620

      >< MaeIII
      >< SfaNI      >< AlwNI      >< MnlI >< MnlI>< DdeI
GTATCATCAC CAGATGCTGT TACTACATAT AATGGATACC TCACTTCGTC ATCAAAGACA TCTGAGGAGC
  4630      4640      4650      4660      4670      4680      4690

      >< SinI
      >< Sau96I
      >< NspIV
      >< NspHII
      >< SduI
      >< NspII
      >< HgiAI
      >< Bsp1286I
      >< BmyI
      >< Alw21I
      >< Eco47I
      >< Cfr13I
      >< Bsi2I
      >< Bml18I
      >< AvaII
      >< AsuI
      >< RsaI
      >< Csp6I
      >< AfaI
ACTTTGTAGA AACAGTTTCT TTGGCTGGCT CTTACAGAGA TTGGTCCTAT TCAGGACAGC GTACAGAGTT
  4700      4710      4720      4730      4740      4750      4760

      > < TthHB8I
      > < TaqI
      >< SduI
      >< NspII
      >< Van91I
      >< PflMI
      >< RsaI
      >< HphI
      >< Csp6I
      >< BsiYI
      >< BmyI GsuI ><
      >< Tru9I
      >< MseI
      >< Esp4I

```

FIGURE 13.12

```

      >> AflIII >> MaeIII      >> AfaI >> AccB7I >> BanIIBpmI >>
AGGTGTTGAA TTTCTTAAGC GTGGTGACAA AATTGTGTAC CACACTCTGG AGAGCCCCGT CGAGTTTCAT
4770      4780      4790      4800      4810      4820      4830

                                >> Tru9I
                                >> P1eI >> EcoNI
                                >> MnlI >> BslI
                                >> BsmAI >> BsiYI
>> MnlI      >> HphI      >> HinfI>> Alw26I>> AciI >> MseI
CTTGACGGTG AGGTTCTTTC ACTTGACAAA CTAAAGAGTC TCTTATCCCT GCGGGAGGTT AAGACTATAA
4840      4850      4860      4870      4880      4890      4900

                                >> AluI      >> NdeI
AAGTGTTCAC AACTGTGGAC AACACTAATC TCCACACACA GCTTGTGGAT ATGTCTATGA CATATGGACA
4910      4920      4930      4940      4950      4960      4970

>> SniI
>> Sau96I
>> NspIV
>> NspHII
>> Eco47I
>> CfrI3I
>> BsiZI
>> BmeI8I
>> AvaII
>> AsuI
                                >> MaeIII >> Tru9I >> MnlI
                                >> FokI >> MseI >> BspHI
GCAGTTTGGT CCAACATACT TGGATGGTGC TGATGTTACA AAAATTAAAC CTCATGTAAA TCATGAGGGT
4980      4990      5000      5010      5020      5030      5040

                                > < TthHB8I
                                > < TaqI
>> RsaI
> < RmaI      >> SnaBI      >> ScaI
> < MaeI      >> MaeII >> HindIII >> RsaI
>> Csp6I      >> Eco105I      >> Csp6I
>> AfaI      >> BsaAI >> AluI >> AfaI
AAGACTTTCT TTGTACTACC TAGTGATGAC ACACTACGTA GTGAAGCTTT CGAGTACTAC CATACTCTTG
5050      5060      5070      5080      5090      5100      5110

>> RsaI
>> NspI
>> NspHI
>> NlaIII
> < Csp6I      >> Tru9I      MnlI >
>> AflIII >> MseI      BslI >>
>> AfaI >> DraI      BsiYI >>
ATGAGAGTTT TCTTGGTAGG TACATGTCTG CTTTAAACCA CACAAAGAAA TGGAAATTTT CTCAAGTTGG
5120      5130      5140      5150      5160      5170      5180

>> Tru9I >> Tru9I      >> RmaI
>> MseI >> MseI      >> MunI >> MaeI      AluI >
TGGTTTAACT TCAATTAAAT GGGCTGATAA CAATTGTTAT TTGTCTAGTG TTTTATTAGC ACTTCAACAG
5190      5200      5210      5220      5230      5240      5250

                                >> SfaNI
                                >> SduI
                                >> NspII
                                >> Eco24I
                                >> BspI286I
                                >> BmyI      HphI >
                                >> BbvI Fnu4HI >>
                                >> BanII >> BspWI
>> MnlI

```

FIGURE 13.13

```

CTTGAAGTCA AATTCAATGC ACCAGCACTT CAAGAGGCTT ATTATAGAGC CCGTGCTGGT GATGCTGCTA
  5260      5270      5280      5290      5300      5310      5320

>< VneI
>< SnaI
    >< SduI
    >< NspII
    >< HgiAI
    >< Bsp1286I
    >< BmyI
>< ApaLI
>< Alw44I
    >< Alw21I
ACTTTTGTGC ACTCATACTC GCTTACAGTA ATAAACTGT TGGCGAGCTT GGTGATGTCA GAGAACTAT
  5330      5340      5350      5360      5370      5380      5390
                                >< AluI
                                MboII ><
                                >< HphI

    > < SphI
    > < PaeI
    > < NspI
    > < NspHI >< TfiI
    >< SfcI > < NlaIII>< HinfI
    >< Tru9I
    >< MseI
GACCCATCTT CTACTACATG CTAATTTGGA ATCTGCAAAG CGAGTTCTTA ATGTGGTGTG TAAACATTGT
  5400      5410      5420      5430      5440      5450      5460
                                >< RsaI
                                > < Csp6I
                                >< AfaI
                                Esp4I >
                                AflII >

    >< Tru9I
    >< MseI
GGTCAGAAAA CTACTACCTT AACGGGTGTA GAAGCTGTGA TGTATATGGG TACTCTATCT TATGATAATC
  5470      5480      5490      5500      5510      5520      5530
                                >< RsaI
                                >< MboII
                                >< RmaI HinfI ><
                                >< Csp6I
                                >< MaeI >< BbsI
                                >< AfaI

>< Tru9I
>< MseI
TTAAGACAGG TGTTCCTT CCATGTGTGT GTGGTCGTGA TGCTACACAA TATCTAGTAC AACAGAGTC
  5540      5550      5560      5570      5580      5590      5600
                                >< RsaI
                                >< Csp6I
                                >< AfaI
                                > < DdeI
                                >< BspWI >< BspMI

    >< PleI
    >< BsgI
TTCTTTTGTG ATGATGTCTG CACCACCTGC TGAGTATAAA TTACAGCAAG GTACATTCTT ATGTGCGAAT
  5610      5620      5630      5640      5650      5660      5670
                                >< RsaI
                                >< DdeI
                                >< BsmAI
                                >< BsaI
                                >< Alw26I
                                MnlI ><
                                >< HphI >

    >< RsaI
    > < MaeIII
    >< Csp6I
    >< AfaI >< BsrI
GAGTACACTG GTAACATATCA GTGTGGTCAT TACACTCATA TAACTGCTAA GGAGACCCCTC TATCGTATTG
  5680      5690      5700      5710      5720      5730      5740
                                >< Eco31I
                                >< DdeI
                                >< BsmAI
                                >< BsaI
                                >< Alw26I
                                MnlI ><
                                >< HphI >

    >< SstI
    >< SduI
    >< SacI
    >< NspII
    >< HgiAI
    >< Eco24I
    >< Ecl136II
    >< Bsp1286I
    >< BmyI
                                >< SinI
                                >< Sau96I
                                >< NspIV
                                >< NspHII
                                > < RsaI
                                >< MaeIII
                                >< Eco47I
                                >< Cfr13I
                                >< BsiZI
                                >< Bme18I

```

FIGURE 13. 14

28/116

```

    >< BanII
    >< Alw21I
    >< AluI
ACGGAGCTCA CCTTACAAAG ATGTCAGAGT ACAAAGGACC AGTGACTGAT GTTTTCTACA AGGAAACATC
    5750      5760      5770      5780      5790      5800      5810

    >< TthHB8I
    >< TaqI >< MaeIII
TTACTACTACA ACCATCAAGC CTGTGTCGTA TAAACTCGAT GGAGTTACTT ACACAGAGAT TGAACCAAAA
    5820      5830      5840      5850      5860      5870      5880

    >< RsaI
    >< Csp6I
    >< SfcI >< BbvI
    >< Fnu4HI
    >< AfaI
TTGGATGGGT ATTATAAAAA GGATAATGCT TACTATACAG AGCAGCCTAT AGACCTTGTA CCAACTCAAC
    5890      5900      5910      5920      5930      5940      5950

    Tru9I ><
    SwaI ><
    MseI ><
    > < NspI
    > < NspHI
    > < NlaIII
    >< AflIII
    BsiBI ><
    BsaBI ><
CATTACCAAA TGCGAGTTTT GATAATTCA AACTCACATG TTCTAACACA AAATTTGCTG ATGATTTAAA
    5960      5970      5980      5990      6000      6010      6020

    >< MboII
    >< AluI >< AluI >< MaeIII
TCAAATGACA GGCTTCACAA AGCCAGCTTC ACGAGAGCTA TCTGTCACAT TCTTCCCAGA CTTGAATGGC
    6030      6040      6050      6060      6070      6080      6090

    >< SfcI
GATGTAGTGG CTATTGACTA TAGACACTAT TCAGCGAGTT TCAAGAAAGG TGCTAAATTA CTGCATAAGC
    6100      6110      6120      6130      6140      6150      6160

    >< Tru9I
    >< ScrFI
    >< MvaI
    >< MseI
    >< EcoRII
    >< Ecl136I
    >< DsaV
    >< BstOI
    >< BstNI
    >< BsiLI
    >< MunI
    >< BstXI
    >< ApyI
    >< MaeII
    >< DraIII
    >< BstXI
CAATTGTTTG GCACATTAAC CAGGCTACAA CCAAGACAAC GTTCAAACCA AACACTTGGT GTTTACGTTG
    6170      6180      6190      6200      6210      6220      6230

    > < RsaI
    >< Csp6I
    > < AfaI >< BsrI
    >< MboII ><
    >< BbsI
TCTTTGGAGT ACAAAGCCAG TAGATACTTC AAATTCATT T GAAGTTCTGG CAGTAGAAGA CACACAAGGA
    6240      6250      6260      6270      6280      6290      6300

    >< HindII
    >< HincII
    >< MboII
    >< MnlI
    >< Eco57I
ATGGACAATC TTGCTTGTTGA AAGTCAACAA CCCACCTCTG AAGAAGTAGT GGAAAATCCT ACCATACAGA
    6310      6320      6330      6340      6350      6360      6370

```

FIGURE 13.15

29/116

```

    >< MaeIII
    >< MaeII
AGGAAGTCAT AGAGTGTGAC GTGAAACTA CCGAAGTTGT AGGCAATGTC ATACTTAAAC CATCAGATGA
6380      6390      6400      6410      6420      6430      6440

    >< XhoII
    >< Sau3AI
    >< NlaIII
    >< NdeII
    >< MflI
    >< MboI
    >< DpnII
    >< DpnI
    >< BstYI
    >< BspAI
    >< Tru9I
    >< MseI
    >< BspHI >< Bsp143I>< Fnu4HI
    >< MaeIII >< MnlI >< BbvI >< AluI
AGGTGTTAAA GTAACACAAG AGTTAGGTCA TGAGGATCTT ATGGCTGCTT ATGTGGAAAA CACAAGCATT
6450      6460      6470      6480      6490      6500      6510

    >< SauI
    >< RmaI
    >< MstII
    >< MaeI
    >< Eco81I
    >< DdeI
    >< CvnI
    >< Bsu36I
    >< Bse21I
    >< BfrI> < Tru9I
    >< AxyI> < MseI>< MunI
    >< AocI >< DraI >< BbvI Fnu4HI >< NlaIII
    >< Tru9I
    >< MseI >< AluI >< AocI >< DraI >< BbvI Fnu4HI ><
ACCATTAAGA AACCTAATGA GCTTTCCTA GCCTTAGGTT TAAAAACAAT TGCCACTCAT GGTATTGCTG
6520      6530      6540      6550      6560      6570      6580

    >< VspI >< StyI
    >< Tru9I >< EcoT14I
    >< MseI >< Eco130I
    >< AsnI >< BssT1I
    >< AseI >< BsaJI
    >< BfrI >< Fnu4HI
CAATTAATAG TGTTCCTTGG AGTAAAATTT TGGCTTATGT CAAACCATTG TTAGGACAAG CAGCAATTAC
6590      6600      6610      6620      6630      6640      6650

    >< HinP1I
    >< Hin6I
    >< HhaI
    >< DdeI
    >< BbvI >< CfoI
    >< MaeII>< MseI
    >< DraIII
    >< AflIII
AACATCAAAT TGCCTAAGA GATTAGCACA ACGTGTGTTT AACAATTATA TGCCTTATGT GTTTACATTA
6660      6670      6680      6690      6700      6710      6720

    >< RsaI >< RsaI>< XbaI
    >< Csp6I >< Csp6I >< RmaI
    >< MunI >< AfaI >< AfaI >< MaeI >< AluI
TTGTTCCAAT TGTGTACTTT TACTAAAAGT ACCAATTCTA GAATTAGAGC TTCACTACCT ACAACTATTG
6730      6740      6750      6760      6770      6780      6790

    >< VspI
    >< Tru9I
    >< NaeI
    >< MspI
    >< MseI

```

FIGURE 13. 16

30/116

```

                                >< HpaII
                                >< HapII
                                >< Cfr10I >< FokI
                                >< AsnI
                                >< AseI>< HphI>< MaeIII
                                >< Tru9I
                                >< MseI
                                >< SfaNI
CTAAAAATAG TGTTAAGAGT GTTGCTAAAT TATGTTTGGA TGCCGGCATT AATTATGTGA AGTCACCCAA
6800        6810        6820        6830        6840        6850        6860

                                >< Tru9I
                                >< MseI
                                >< DdeI
                                >< BfrI
                                >< MaeIII >
                                >< BbvI
ATTTTCTAAA TTGTTACAA TCGCTATGTG GCTATTGTTG TTAAGTATT GCTTAGGTTT TCTAATCTGT
6870        6880        6890        6900        6910        6920        6930

                                >< SduI
                                >< NspII
                                >< HgiAI
                                >< Bsp1286I
                                >< BmyI
                                >< Alw21I
                                >< RsaI
                                >< Csp6I
                                >< Fnu4HI
                                >< AfaI
GTAACGTGCTG CTTTGGTGT ACTCTTATCT AATTTTGGTG CTCCTTCTTA TTGTAATGGC GTTAGAGAAT
6940        6950        6960        6970        6980        6990        7000

                                Tru9I ><
                                MseI ><
                                >< Fnu4HI
                                >< BbvI >
                                >< Tru9I
                                >< MseI
                                >< MaeIII
                                >< MaeII
TGTATCTTAA TTCGTCTAAC GTTACTACTA TGGATTTCTG TGAAGGTTCT TTTCCTTGCA GCATTTGTTT
7010        7020        7030        7040        7050        7060        7070

                                >< TfiI
                                >< MamI
                                >< HinfI
                                >< BsiBI
                                >< XmnI>< MaeIII
                                >< PleI>< HinfI
                                >< BsaBI >< AluI
                                >< Asp700I
                                >< RsaI ><
                                >< HphI
                                >< Csp6I ><
                                >< AluI >
                                >< AfaI ><
AAGTGGATTA GACTCCCTTG ATTCTTATCC AGCTCTTGAA ACCATTGAGG TGACGATTTC ATCGTACAAG
7080        7090        7100        7110        7120        7130        7140

                                >< Pali
                                >< NspBII
                                >< HaeIII
                                >< GdiII
                                >< Fnu4HI
                                >< EaeI
                                >< DdeI
                                >< BsuRI
                                >< RmaI
                                >< MaeI
                                >< BshI >< BslI
                                >< AciI>< BsiYI
CTAGACTTGA CAATTTTAGG TCTGGCCGCT GAGTGGGTTT TGGCATATAT GTTGTTTACA AAATTCTTTT
7150        7160        7170        7180        7190        7200        7210

                                >< BspMI
                                >< AluI
                                >< RmaI
                                >< MaeI
ATTATATTAGG TCTTTCAGCT ATAATGCAGG TGTTCTTTGG CTATTTTGCT AGTCATTTC TCAGCAATTC
7220        7230        7240        7250        7260        7270        7280

                                >< RsaI ><
                                >< MboII
                                >< NlaIV
                                >< Eco64I
                                >< RsaI >< BscBI
                                >< Csp6I >< BanI
                                >< AfaI>< AccBII
                                >< NlaIII
                                >< BsaBI ><
                                >< AfaI ><

```

FIGURE 13.17

31/116

```

TTGGCTCATG TGGTTTATCA TTAGTATTGT ACAAATGGCA CCCGTTTCTG CAATGGTTAG GATGTACATC
7290          7300          7310          7320          7330          7340          7350

                                TthHB8I >>
                                >> TaqI
                                MnlI >>
                                >> NdeI
                                >> Ksp632I
                                >> EarI
                                >> Eam1104I >> AluI >> MboII >> NlaIII Eam1104I >>
                                >> FokI
                                >> MboII EarI >>
TTCTTTGCTT CTTTCTACTA CATATGGAAG AGCTATGTTT ATATCATGGA TGGTGCACC TCTTCGACTT
7360          7370          7380          7390          7400          7410          7420

                                XhoII >>
                                Sau3AI >>
                                NlaIII >>
                                NdeII >>
                                MflI >>
                                MboI >>
                                >> Thai
                                >> MvnI
                                >> Ksp632I
                                >> EarI
                                >> Eam1104I
                                >> HinPII
                                >> MluI
                                >> BstUI
                                >> DpnII >>
                                >> HhaI
                                >> Bsp50I >> RsaI
                                >> BstYI >>
                                >> NlaIII
                                >> AflIII >> Csp6I
                                >> Tru9I BspAI >>
                                >> BspWI >> BspWI
                                >> AccII >> AfaI
                                >> MseI BglII >>
GCATGATGTG CTATAAGCGC AATCGTGCCA CACGCGTTGA GTGTACAACT ATTGTTAATG GCATGAAGAG
7430          7440          7450          7460          7470          7480          7490

                                >> Pali
                                >> HaeIII
                                >> DsaI
                                >> Muni
                                >> MboII
                                >> BsuRI
                                >> BshI
                                >> Muni
                                >> MaeIII >>
                                >> DpnI
                                >> Bsp143I
                                >> MnlI
                                >> BsaJI >> PleI >> HinfI
                                >> BsmAI >>
                                >> Bsp143I
                                >> MnlI
                                >> BsaJI >> PleI >> HinfI
                                >> BsmAI >>
ATCTTTCTAT GTCTATGCAA ATGGAGGCCG TGGCTTCTGC AAGACTCACA ATTGGAATTG TCTCAATTGT
7500          7510          7520          7530          7540          7550          7560

                                >> RsaI
                                >> Csp6I
                                >> BsrI
                                >> AfaI
                                >> GsuI
                                >> BpmI
                                >> Tru9I >>
                                >> MseI >>
                                >> BsrI
                                >> MaeIII DraI >>
                                >> AfaI
                                >> BpmI
                                >> BsrI
GACACATTTT GCACTGGTAG TACATTCATT AGTGATGAAG TTGCTCGTGA TTTGTCACTC CAGTTTAAAA
7570          7580          7590          7600          7610          7620          7630

                                >> Thai
                                >> MvnI
                                >> HphI
                                >> HinPII >>
                                >> HinPII
                                >> Hin6I
                                >> Hin6I
                                >> HhaI >>
                                >> HhaI
                                >> CfoI >>
                                >> CfoI
                                >> BstUI
                                >> BssHII
                                >> Bsp50I >>
                                >> BsrI
                                >> AccII
GACCAATCAA CCTACTGAC CAGTCATCGT ATATTGTGTA TAGTGTGCT GTGAAAAATG GCGCGCTTCA
7640          7650          7660          7670          7680          7690          7700

```

FIGURE 13. 18

32/116

```

      >> FokI
      >> BsmAI
      >> MnlI      >> Alw26I      >> AclI
CCTCTACTTT GACAAGGCTG GTCAAAAGAC CTATGAGAGA CATCCGCTCT CCCATTTTGT CAATTTAGAC
7710      7720      7730      7740      7750      7760      7770

      >> VspI
      >> Tru9I
      >> MseI
      >> AsnI
      >> AseI
      >> BcgI/a
      >< AluI
AATTTGAGAG CTAACAACAC TAAAGGTTCA CTGCCTATTA ATGTCATAGT TTTTGATGGC AAGTCCAAAT
7780      7790      7800      7810      7820      7830      7840

      >> SfcI      >> PvuII
      >> RsaI      >> Psp5I
      >> PleI      >> Csp6I      >> NspBII
      >> HinfI      >> DdeI      >> BcgI      >> AfaI      >> AluI
GCGACGAGTC TGCTTCTAAG TCTGCTTCTG TGACTACAG TCAGCTGATG TGCCAAACCTA TTCTGTTGCT
7850      7860      7870      7880      7890      7900      7910

      TthHB8I >>
      TaqI >>
      SalI >>
      RtrI >>
      HindII >
      HincII >
      >> ScaI
      >> RsaI      >> Tru9I
      >> Csp6I      >> SfaNI >> Eco57I
      >> AluI      >> MaeII      >> AfaI      >> MseI      >> AccI >>
TGACCAAGCT CTTGTATCAG ACGTTGGAGA TAGTACTGAA GTTTCGGTGA AGATGTTTGA TGCTTATGTC
7920      7930      7940      7950      7960      7970      7980

      >> Tru9I
      >> MseI
      >< Esp4I      >> SfcI
      >< AflIII      >> BspWI >> AluI
GACACCTTTT CAGCAACTTT TAGTGTTTCT ATGGAAAAAC TTAAGGCACT TGTTGCTACA GCTCACAGCG
7990      8000      8010      8020      8030      8040      8050

      >> PvuII
      >> Psp5I
      >> NspBII
      >> Fnu4HI
      >> AluI      >> BbvI
      >> AluI
AGTTAGCAAA GGGTGTAGCT TTAGATGGTG TCCTTTCTAC ATTCGTGTCA GCTGCCCCGAC AAGGTGTTGT
8060      8070      8080      8090      8100      8110      8120

      >> HindII
      >> HincII
      >> BsmAI
      >> FokI >> Alw26I
      >> MaeIII >>
      >> DdeI
      >> BfrI
TGATACCGAT GTTGACACAA AGGATGTTAT TGAATGTCTC AAACCTTTCAC ATCACTCTGA CTTAGAAGTG
8130      8140      8150      8160      8170      8180      8190

      >> XhoII
      Sau3AI >>
      >> NdeII
      >> MflI
      >> MboI
      >> NlaIII >> HgaI
      >> HinfI >> DpnII
      DpnI >>

```

FIGURE 13.19

Bsp143I ><
 >< BsaHI >< BstYI
 >< BbiIII >< BspAI
 >< AcyI >< BglII
 >< MaeIII >< HphI
 >< HphI >< NlaIII
 ACAGGTGACA GTTGTAAACA TTTCATGCTC ACCTATAATA AGGTTGAAAA CATGACGCCC AGAGATCTTG
 8200 8210 8220 8230 8240 8250 8260
 >< NspI
 >< NspHI
 >< NlaIII
 >< HinPII
 >< Hin6I
 >< HhaI
 >< CfoI
 GCGCATGTAT TGAAGTGAAT GCAAGGCATA TCAATGCCCA AGTAGCAAAA AGTCACAATG TTTCACATCAT
 8270 8280 8290 8300 8310 8320 8330
 >< BspWI >< MaeIII
 >< NspI
 >< NspHI
 >< NlaIII
 >< PvuII
 >< Psp5I
 >< Eam1105I
 >< NspBII
 >< BbvI
 >< Fnu4HI
 >< AflIII
 >< AluI >< BbvI >< Fnu4HI
 CTGGAATGTA AAAGACTACA TGTCTTTATC TGAACAGCTG CGTAAACAAA TTCGTAGTGC TGCCAAGAAG
 8340 8350 8360 8370 8380 8390 8400
 >< RmaI
 >< MaeI >< Eam1105I
 AACACATAC CTTTGTAGACT AACTTGTGCT ACAACTAGAC AGGTTGTCAA TGTCACTAAT ACTAAAATCT
 8410 8420 8430 8440 8450 8460 8470
 >< Tru9I
 >< Pali
 >< MseI
 >< HaeIII
 >< ScaI
 >< Esp4I
 >< RsaI >< Tru9I
 >< BsuRI
 >< Csp6I >< MseI
 >< BshI
 >< AfaI >< DraI
 >< AflIII >< BbvI
 CACTCAAGGG TGGTAAGATT GTTAGTACTT GTTTTAACT TATGCTTAAG GCCACATTAT TGTGCGTTCT
 8480 8490 8500 8510 8520 8530 8540
 >< RsaI
 >< Csp6I
 >< BsrI
 >< NlaIII
 >< Fnu4HI
 >< AfaI
 >< MaeIII
 TGCTGCATTG GTTTGTTATA TCGTTATGCC AGTACATACA TTGTCAATCC ATGATGGTTA CACAAATGAA
 8550 8560 8570 8580 8590 8600 8610
 >< MaeIII
 >< MaeIII
 >< FokI
 ATCATTGGTT ACAAGCCAT TCAGGATGGT GTCACCTCGTG ACATCATTTT TACTGATGAT TGTTTTGCAA
 8620 8630 8640 8650 8660 8670 8680
 >< NspI
 >< NspHI
 >< NlaIII
 >< HgaI
 >< BstXI
 >< BbvI
 >< AluI
 ATAAACATGC TGGTTTTGAC GCATGGTTTA GCCAGCGTGG TGGTTCATAC AAAAATGACA AAAGCTGCCC
 8690 8700 8710 8720 8730 8740 8750
 SfcI >
 Fnu4HI >
 BbvI >

FIGURE 13. 20

```

                                >< ScrFI
                                >< ScrFI    >< RsaI
                                >< MvaI    >< MspI
                                >< EcoRII   >< HpaII
                                >< Ecl136I>< NciI
                                >< DsaV    >< HapII
                                >< BstOI>< DsaV
                                >< BstNI    >< Csp6I
                                >< BsiLI   >< BcnIDdeI ><
                                >< ApyI    >< AfaI
                                >< Fnu4HI
                                >< AluI
TGTAAGTAGCT GCTATCATT CAAGAGAGAT TGGTTTCATA GTGCCTGGCT TACCGGGTAC TGTGCTGAGA
8760      8770      8780      8790      8800      8810      8820

                                > < MaeIII   >< HphI           >< MnlI           >< BspWI
GCAATCAATG GTGACTTCTT GCATTTTCTA CCTCGTGTTT TTAGTGCTGT TGGCAACATT TGCTACACAC
8830      8840      8850      8860      8870      8880      8890

                                Tru9I >
                                SfaNI ><
                                >< RsaI
                                MseI >
                                >< BspWI           >< Fnu4HI >< Csp6I
                                >< BbvI>< MnlI       >< DdeI >< AfaI
CTTCCAAACT CATTGAGTAT AGTGATTTTG CTACCTCTGC TTGCGTTCTT GCTGCTGAGT GTACAATTTT
8900      8910      8920      8930      8940      8950      8960

                                > < RnaI
                                >< MnlI
                                >< FokI
                                > < MaeI
TAAGGATGCT ATGGGCAAAC CTGTGCCATA TTGTTATGAC ACTAATTTGC TAGAGGGTTC TATTTCTTAT
8970      8980      8990      9000      9010      9020      9030

                                ScrFI >
                                MvaI >
                                MnlI ><
                                EcoRII ><
                                Ecl136I >
                                DsaV ><
                                BstOI >
                                BstNI >
                                BsiLI >
                                ApyI >
                                >< NlaIV
                                >< BscBI
                                >< FokI
                                >< AluI
AGTGAGCTTC GTCCAGACAC TCGTTATGTG CTTATGGATG GTTCCATCAT ACAGTTTCCT AACACTTACC
9040      9050      9060      9070      9080      9090      9100

                                >< RsaI
                                >< SfcI           >< NspI
                                >< ScaI           >< NspHI
                                >< RsaI           >< NlaIII
                                >< Csp6I           >< NlaIII
                                >< AfaI           >< Csp6I
                                >< DdeI           >< AccI   >< AfaI
TGGAGGGTTC TGTTAGAGTA GTAACAACCT TTGATGCTGA GTACTGTAGA CATGGTACAT GCGAAAGGTC
9110      9120      9130      9140      9150      9160      9170

                                >< SstI
                                >< SduI
                                >< SacI
                                NspII ><
                                HgiAI ><
                                Eco24I ><
                                Bsp1286I ><

```

FIGURE 13.21

```

                                Ecl136II ><> BmyI
                                BanII ><
                                >< Tru9I
                                Alw21I ><
                                >< BsrI
                                >< MseI
                                >< AluI
AGAAGTAGGT ATTTGCCTAT CTACCAAGTGG TAGATGGGTT CTTAATAATG AGCATTACAG AGCTCTATCA
  9180          9190          9200          9210          9220          9230          9240

                                >< TfiI
                                >< SfaNI
                                >< HinfI
                                >< AluI
                                >< MnlI
GGAGTTTTCT GTGGTGTGGA TGCGATGAAT CTCATAGCTA ACATCTTTAC TCCTCTGTG CAACCTGTGG
  9250          9260          9270          9280          9290          9300          9310

                                >< MaeIII
                                HphI ><
                                >< Eco57I
                                >< BbvI Fnu4HI ><
GTGCTTTAGA TGTGTCTGCT TCAGTAGTGG CTGGTGGTAT TATTGCCATA TTGGTGACTT GTGCTGCCA
  9320          9330          9340          9350          9360          9370          9380

                                >< RsaI
                                >< Csp6I
                                >< NlaIII
                                >< MaeII
                                >< BbvI
                                >< Fnu4HI
                                >< AflIII
                                >< AfaI>< HphI
                                >< BspWI
CTACTTTATG AAATTCAGAC GTGTTTTTGG TGAGTACAAC CATGTTGTTG CTGCTAATGC ACTTTTGT
  9390          9400          9410          9420          9430          9440          9450

                                >< RsaI
                                >< NlaIV
                                >< KpnI
                                >< Eco64I
                                >< Csp6I
                                >< BscBI
                                >< Asp718
                                >< BanI >< AluI
                                >< AfaI
                                >< AccB1I
                                >< Acc65I
                                >< ScrFI
                                >< NciI
                                >< MspI
                                >< HpaII
                                >< HinfI
                                >< HapII
                                >< PleI
                                >< BcnI
                                >< DdeI
TTGATGTCTT TCACTATACT CTGTCTGGTA CCAGCTTACA GCTTTCTGCC GGGAGTCTAC TCAGTCTTTT
  9460          9470          9480          9490          9500          9510          9520

                                >< RsaI
                                >< Csp6I
                                >< AfaI
                                >< HphI
                                >< HphI
                                NlaIII ><
ACTTGACTT GACATTCTAT TTCACCAATG ATGTTTCATT CTTGGCTCAC CTTCAATGGT TTGCCATGTT
  9530          9540          9550          9560          9570          9580          9590

TTCTCCTATT GTGCCTTTTT GGATAACAGC AATCTATGTA TTCTGTATTT CTCTGAAGCA CTGCCATTGG
  9600          9610          9620          9630          9640          9650          9660

                                >< TthHB8I
                                >< RsaI
                                >< MnlI
                                >< MnlI
                                >< Csp6I
                                >< Tru9I
                                >< PleI
                                >< BcgI/a
                                >< TaqI
                                >< MseI
                                >< DdeI
                                >< NlaIII
                                >< BbvI
                                >< Eco57I
                                >< BfrI
                                >< HinfI
                                >< MseI
                                >< MaeIII
                                >< AfaI Fnu4HI ><
TTCTTTAACA ACTATCTTAG GAAAAGAGTC ATGTTTAATG GAGTTACATT TAGTACCTTC GAGGAGGCTG
  9670          9680          9690          9700          9710          9720          9730

                                >< RsaI
                                >< Csp6I
                                >< BcgI
                                >< RsaI
                                >< Csp6I
                                >< BsmAI

```

FIGURE 13.22

```

    >< AfaI          >< AfaI          >< Alw26I
CTTTGTGTAC CTTTTTGCTC AACAAAGGAAA TGTACCTAAA ATTGCGTAGC GAGACACTGT TGCCACTTAC
  9740      9750      9760      9770      9780      9790      9800

                                >< NlaIV
                                >< DdeI
                                >< BscBI
                                >< BfrI   AluI ><
ACAGTATAAC AGGTATCTTG CTCTATATAA CAAGTACAAG TATTTCAGTG GAGCCTTAGA TACTACCAGC
  9810      9820      9830      9840      9850      9860      9870

    >< Fnu4HI
                                >< DdeI
                                >< BfrI
    >< BbvI   >< Fnu4HI   >< BbvI   >< DdeI >< AlwNI
TATCGTGAAG CAGCTTGCTG CCACTTAGCA AAGGCTCTAA ATGACTTTAG CAACTCAGGT GCTGATGTTG
  9880      9890      9900      9910      9920      9930      9940

                                >< SfcI          >< BsmI
                                >< PstI          >< BscCI
TCTACCAACC ACCACAGACA TCAATCACTT CTGCTGTTCT GCAGAGTGGT TTTAGGAAAA TGGCATTCCC
  9950      9960      9970      9980      9990      10000     10010

                                >< RsaI
                                >< NlaIII
                                >< MaeIII
                                >< Csp6I
                                >< AfaI
GTCAGGCAAA GTTGAAGGGT GCATGGTACA AGTAACCTGT GGAAC TACAA CTCTTAATGG ATTGTGGTTG
  10020     10030     10040     10050     10060     10070     10080

                                XhoII ><
                                Sau3AI ><
                                >< Tru9I   NdeII ><
                                >< NspI     MflI ><
                                >< NspHI    MboI ><
                                >< NlaIII   DpnII ><
                                >< MseI     BstYI ><
                                >< MboII   BspAI ><
                                >< BbsI     BglII ><
GATGACACAG TATACTGTCC AAGACATGTC ATTTGCACAG CAGAAGACAT GCTTAATCCT AACTATGAAG
  10090     10100     10110     10120     10130     10140     10150

                                Pali >
                                MscI >
                                HaeIII >
                                EaeI ><
                                BsuRI >
                                BshI >
                                Bali >
>< DpnI >< MboII
>< Bsp143I
ATCTGTCAT TCGCAAATCC AACCATAGCT TTCTTGTTC A GGCTGGCAAT GTTCAACTTC GTGTTATTGG
  10160     10170     10180     10190     10200     10210     10220

                                >< DdeI> < Tru9I
                                >< BfrI> < MseI
                                >< DdeI
CCATTCTATG CAAAATTGTC TGCTTAGGCT TAAAGTTGAT ACTTCTAACC CTAAGACACC CAAGTATAAA
  10230     10240     10250     10260     10270     10280     10290

    >< ScrFI
    >< MvaI
    >< EcoRII
    >< Ecl136I

                                >< SphI

```

FIGURE 13.23

FIGURE 13. 24

FIGURE 13. 24

```

>< EcoO109I
>< Eco47I
>< Sau3AI
>< NdeII
>< MboI
>< DpnII>< NlaIII
>< DpnI >< HindII
>< BspAI >< HincII
>< Bsp143I
ACACAAGATC ATGTTGACAT ATTGGGACCT CTTTCTGCTC AAACAGGAAT TGCCGTCTTA GATATGTGTG
10720      10730      10740      10750      10760      10770      10780

>< EcoO109I
>< Eco47I
>< DraII
>< Cfr13I
>< BsiZI
>< BscBI
>< Bme18I
>< DdeI
>< BfrI
>< BbvI
>< MnlI
ACACAAGATC ATGTTGACAT ATTGGGACCT CTTTCTGCTC AAACAGGAAT TGCCGTCTTA GATATGTGTG
10720      10730      10740      10750      10760      10770      10780

>< StyI
>< RsaI
>< EcoT14I
>< Eco130I
>< SfcI
>< Fnu4HI
>< BbvI
>< BbvI
>< AluI
>< PstI
>< AfaI
CTGCTTTGAA AGAGCTGCTG CAGAATGGTA TGAATGGTCG TACTATCCTT GGTAGCACTA TTTTAGAAGA
10790      10800      10810      10820      10830      10840      10850

>< StyI
>< EcoT14I
>< Eco130I
>< BssTII
>< BsaJI
>< MaeIII>< BsaJI
TGAGTTTACA CCATTTGATG TTGTTAGACA ATGCTCTGGT GTTACCTTCC AAGGTAAGTT CAAGAAAATT
10860      10870      10880      10890      10900      10910      10920

>< SfaNI
>< SduI
>< NspII
>< Tru9I
>< Bsp1286I
>< MseI
>< BmyI
>< FokI
>< TfiI
>< HinfI
>< AfaI
GTTAAGGGCA CTCATCATTG GATGCTTTTA ACTTTCTTGA CATCACTATT GATTCTTGTT CAAAGTACAC
10930      10940      10950      10960      10970      10980      10990

>< XmnI
>< BsmI
>< BscCI
>< Asp700I
>< BbvI
>< BbvI
AGTGGTCACT GTTTTTCTTT GTTTACGAGA ATGCTTTCTT GCCATTTACT CTTGGTATTA TGGCAATTGC
11000      11010      11020      11030      11040      11050      11060

>< NspI
>< NspHI
>< NlaIII
>< BspWI
>< Fnu4HI>< BspWI
>< BscCI
>< MaeIII
TGCATGTGCT ATGCTGCTTG TTAAGCATAA GCACGCATTC TTGTGCTTGT TTCTGTTACC TTCTCTTGCA
11070      11080      11090      11100      11110      11120      11130

>< SfaNI
>< RmaI
>< NspI
>< NlaIII
>< NheI
>< MaeI
>< BsiBI
>< NlaIII
>< Tru9I
>< BspWI
>< MseI
>< AccI>< NspHI>< AluI
>< BsaBI
>< NlaIII
ACAGTTGCTT ACTTTAATAT GGTCTACATG CCTGCTAGCT GGGTGATGCG TATCATGACA TGGCTTGAAT
11140      11150      11160      11170      11180      11190      11200

```

FIGURE 13.25

39/116

```

                                >< Tru9I
                                >< MseI
                                >< Esp4I
                                >< Eco57I
                                >< AluI
                                >< AflIII
                                >< AluI
TGGCTGACAC TAGCTTGTCT GGTATAGGC TTAAGGATTG TGTTATGTAT GCTTCAGCTT TAGTTTGTCT
11210      11220      11230      11240      11250      11260      11270

                                >< RmaI
                                >< MaeII
                                >< MaeI
                                >< Fnu4HI
                                >< AflIII
                                >< BspHI >< AluI >< BbvI
TATTCTCATG ACAGCTCGCA CTGTTTATGA TGATGCTGCT AGACGTGTTT GGACACTGAT GAATGTCATT
11280      11290      11300      11310      11320      11330      11340

                                >< Sau96I
                                >< Pali
                                >< NspIV
                                >< NlaIII
                                >< HaeIII
                                >< DdeI
                                >< Cfr13I
                                >< BsuRI
                                >< BsiZI
                                >< BshI
                                >< BfrI
                                >< AsuI
                                >< BspAI>< AluI
                                >< AccI
ACACTTGTTT ACAAAGTCTA CTATGGTAAT GCTTTAGATC AAGCTATTTC CATGTGGGCC TTAGTTATTG
11350      11360      11370      11380      11390      11400      11410

                                >< RmaI
                                >< NlaIII
                                >< MaeI>< SfcI
                                >< AluI>< AluI
                                >< MaeIII
                                >< MnlI >< MaeIII
CTGTAACCTC TAACTATTCT GGTGTCGTTA CGACTATCAT GTTTTtagCT AGAGCTATAG TGTTTGTGTG
11420      11430      11440      11450      11460      11470      11480

                                >< BsrI
                                >< NlaIII BfrI >
                                >< DdeI >
TGTTGAGTAT TACCCATTGT TATTTATTAC TGGCAACACC TTACAGTGTA TCATGCTTGT TTATTGTTTC
11490      11500      11510      11520      11530      11540      11550

                                >< Pali
                                >< HaeIII
                                >< Fnu4HI >< BsuRI
                                >< BbvI >< Fnu4HI >< BspWI
                                >< BbvI >< BspWI >< BshI >< Eco57I >< MaeIII
TtagGCTATT GTTGCTGCTG CTACTTTGGC CTTTCTGTT TACTCAACCG TTAGTTCAGG CTTACTCTTG
11560      11570      11580      11590      11600      11610      11620

                                >< ScrFI
                                >< MvaI
                                >< EcoRII
                                >< Ecl136I
                                >< DsaV
                                >< BstOI
                                >< BstNI
                                >< BsiLI
                                >< BsaJI
                                >< BsaJI
                                >< Eco31I
                                >< BsmAI
                                >< BsaI

```

FIGURE 13.26

```

>< DrdI >< Alw26I >< ApyI DdeI ><
GTGTTTATGA CTA CTGTTGGTC TCTACACAAG AATTTAGGTA TATGAACTCC CAGGGGCTTT TGCCCTCCTAA
11630 11640 11650 11660 11670 11680 11690

>< Tru9I
>< MseI
>< SfaNI > < HindIII> < Tru9I
>< MnlI >< AluI > < MseI > < MnlI > < NlaIII
GAGTAGTATT GATGCTTTCA AGCTTAACAT TAAGTTGTTG GGTATTGGAG GTAAACCATG TATCAAGGTT
11700 11710 11720 11730 11740 11750 11760

>< VneI
>< SnaI
>< SduI
>< NspII
>< HgiAI
>< Bsp1286I
>< BmyI >< RsaI
>< RsaI >< ApaLI >< MboII
>< Csp6I >< Alw44I >< Csp6I DdeI >
>< AfaI >< MaeII >< Alw21I >< AfaI BfrI >
GCTACTGTAC AGTCTAAAT GTCTGACGTA AAGTGCACAT CTGTGGTACT GCTCTCGGTT CTCAACAAC
11770 11780 11790 11800 11810 11820 11830

>< NspII> < RsaI
>< DraIII
>< SduI> < Csp6I
>< Bsp1286I
>< MboII >< HinfI >< PfuI >< BmyI > < AfaI >< MboII
TTAGAGTAGA GTCATCTTCT AAATTGTGGG CACAATGTGT ACAACTCCAC AATGATATTC TTCTTGCAAA
11840 11850 11860 11870 11880 11890 11900

>< TthHB8I
>< TaqI
>< HindIII >< MboII >< NlaIII
>< AluI > < Eco57I >< BspWI AccI ><
AGACACAAC TGAAGCTTTTCG AGAAGATGGT TTCTCTTTTG TCTGTTTTCG TATCCATGCA GGGTGCTGTA
11910 11920 11930 11940 11950 11960 11970

>< VspI
>< Tru9I >< Ksp632I
>< MseI >< TthHB8I >< EarI
>< AsnI >< TaqI >< MboII >< Eam1104I
>< AseI>< MnlI >< BcgI/a >< Eco57I >< Eco57I >< BcgI
GACATTAATA GGTTGTGCGA GGAAATGCTC GATAACCGTG CTACTCTTCA GGCTATTGCT TCAGAATTGA
11980 11990 12000 12010 12020 12030 12040

>< StuI
>< ScrFI
>< PstI
>< MvaI>< HaeIII
>< EcoRI>< Eco147I
>< Ecl136I
>< DsaV >< BsuRI
>< BstOI
>< BstNI
>< BspWI
>< BsiLI
>< Fnu4HI >< BsaJI >< BshI TfiI ><
>< NdeI >< BspWI>< MnlI >< BglI >< SfcI HinfI ><
>< AclI >< ApyI>< AatI >< AluI

```

FIGURE 13. 27

```

GTTCTTTACC ATCATATGCC GCTTATGCCA CTGCCCAGGA GGCCTATGAG CAGGCTGTAG CTAATGGTGA
12050      12060      12070      12080      12090      12100      12110

    >< XmnI          >< Tru9I          >< SfaNI
    >< HphI          >< MseI          >< DdeI
    >< Asp700I       >< Eco57I       >< BbvI Fnu4HI ><
TTCTGAAGTC GTTCTCAAAA AGTTAAAGAA ATCTTTGAAT GTGGCTAAAT CTGAGTTTGA CCGTGATGCT
12120      12130      12140      12150      12160      12170      12180

                                XhoII ><
                                Sau3AI ><
                                NdeII ><
                                    MnlI >
                                    >< MnlI
                                    >< MflI
                                    >< MboI
                                DpnII ><
                                DpnI ><
                                DdeI ><
                                    BstYI ><
                                >< BspWI          >< RsaIBspAI ><
                                >< BspAI          >< Csp6IBsp143I ><
                                >< Bsp143I       >< AfaIBglII ><
    >< NlaIII
GCCATGCAAC GCAAGTTGGA AAAGATGGCA GATCAGGCTA TGACCCAAAT GTACAAACAG GCAAGATCTG
12190      12200      12210      12220      12230      12240      12250

                                >< SpeI          >< Ksp632I > < HindIII
                                >< RmaI          >< DdeI >< SfaNI
                                >< MaeIII       >< MboII       >< Eam1104I >< BspWI
                                >< MaeI          >< BspWI       >< EarI>< BfrI >< AluI
AGGACAAGAG GGCAAAAGTA ACTAGTGCTA TGCAACAAT GCTCTTCACT ATGCTTAGGA AGCTTGATAA
12260      12270      12280      12290      12300      12310      12320

                                >< Thai
                                >< MvnI
                                >< HinPII
                                >< Hin6I
                                >< HhaI
                                >< CfoI
                                >< BstUI
                                >< Bsp50I
                                >< AccII
    >< Tru9I          >< BstXI          >< SfcI ><
    >< MseI          >< BbvI          >< BsgI ><
TGATGCACTT AACAACATTA TCAACAATGC GCGTGATGGT TGTGTTCCAC TCAACATCAT ACCATTGACT
12330      12340      12350      12360      12370      12380      12390

                                >< RsaI
                                >< NlaIV
                                >< Eco64I
                                >< Csp6I
                                >< BslI
                                >< BsiYI>< KpnI
                                >< BscBI
                                >< Bani
                                >< Asp718
                                >< AfaI
                                >< AccB1I
                                >< Acc65I
    >< NlaIII       >< BstXI          >< MaeIII
    >< Fnu4HI       >< BbvI          >< BsgI ><
ACAGCAGCCA AACTCATGGT TGTTGTCCCT GATTATGGTA CCTACAAGAA CACTTGTGAT GGTAACACCT
12400      12410      12420      12430      12440      12450      12460

    >< Zsp2I
    >< Ppu10I

```

FIGURE 13.28

```

    >< NsiI
    >< Mph1103I
    >< NdeI>< EcoT22I
    >< AvaIII >< SfaNI
    >< SfaNI
    >< AciI
    DdeI ><
    BfrI ><
    TTACATATGC ATCTGCACTC TGGGAAATCC AGCAAGTTGT TGATGCCGGAT AGCAAGATTG TTCAACTTAG
    12470      12480      12490      12500      12510      12520      12530

    >< Pali
    >< HaeIII
    >< MnlI
    >< DdeIDdeI ><
    >< BsuRI
    >< MaeIII
    >< BspWI
    >< Tru9I>< NlaIII
    >< MseI>< HphI
    >< XcmI>< BshI
    >< AluI
    >< BspWI ><
    TGAAATTAAC ATGGACAATT CACCAAATTT GGCTTGGCCT CTTATTGTTA CAGCTCTAAG AGCCAACTCA
    12540      12550      12560      12570      12580      12590      12600

    RsaI ><
    NlaIV ><
    KpnI ><
    >< Fnu4HI
    Eco64I ><
    Csp6I ><
    BscBI ><
    Asp718 ><
    AfaI ><
    >< AciI>< BanI
    AccB1I ><
    >< MseI
    >< HinfI >< PleI
    >< DdeI>< BsrI
    >< PshAI
    Acc65I ><
    >< AluI >< SfcI
    GCTGTAAAC TACAGAATAA TGAAGTGAAGT CCAGTAGCAC TACGACAGAT GTCCTGTGCG GCTGGTACCA
    12610      12620      12630      12640      12650      12660      12670

    >< TthHB8I
    >< TaqI
    >< SfuI
    >< NspV
    >< MnlI
    >< LspI
    >< Csp45I
    >< BstBI
    >< Bsp119I
    >< BsiCI
    >< Bpu14I
    >< AsuII
    >< RsaI
    >< Csp6I
    >< AluI
    >< AfaI
    CACAAACAGC TTGTACTGAT GACAATGCAC TTGCCTACTA TAACAATTTCG AAGGGAGGTA GGTTTGTGCT
    12680      12690      12700      12710      12720      12730      12740

    >< XhoII
    >< Sau3AI
    >< NdeII
    >< MflI
    >< MboI
    >< DpnII
    >< DpnI
    >< BstYI
    >< BspAI
    >< Bsp143I
    >< BglII
    >< TfiI
    >< RmaI
    >< HinfI
    >< MaeI
    >< DdeI
    >< RsaI
    >< Csp6I
    >< Csp6I>< RsaI
    >< AfaI>< AfaI
    GGCATTACTA TCAGACCACC AAGATCTCAA ATGGGCTAGA TTCCCTAAGA GTGATGGTAC AGGTACAATT
    12750      12760      12770      12780      12790      12800      12810

    >< Sau96I
    >< PssI
    >< Pali
    >< NspIV

```

FIGURE 13.29

```

                                >< HaeIII
                                >< EcoO109I
                                >< DraII
                                >< Cfr13I
                                >< BsuRI
                                >< BsiZI      RsaI >
                                >< BshI      Csp6I ><
                                >< AsuI      AfaI >
TACACAGAAC TGGAACCACC TTGTAGGTTT GTTACAGACA CACCAAAAGG GCCTAAAGTG AAATACTTGT
12820      12830      12840      12850      12860      12870      12880

                                >< SfcI
                                > < MboII
                                MaeII ><
                                >< Fnu4HI >< RsaI
                                >< Eco57I >< Csp6I
                                > < BbsI
                                >< Tru9I
                                >< MseI >< MnlI
                                >< BbvI      >< AluI      >< AfaI
ACTTCATCAA AGGCTTAAAC AACCTAAATA GAGGTATGGT GCTGGGCAGT TTAGCTGCTA CAGTACGTCT
12890      12900      12910      12920      12930      12940      12950

                                >< RsaI
                                >< SfcI >< Csp6I
                                >< BspWI      >< AfaI      >< BspMI
TCAGGCTGGA AATGCTACAG AAGTACCTGC CAATTCAACT GTGCTTTCCT TCTGTGCTTT TGCAGTAGAC
12960      12970      12980      12990      13000      13010      13020

                                >< RnaI
                                >< MnlI
                                >< MaeI      >< HphI
CCTGCTAAAG CATATAAGGA TTACCTAGCA AGTGGAGGAC AACCAATCAC CAACTGTGTG AAGATGTTGT
13030      13040      13050      13060      13070      13080      13090

                                >< SinI
                                >< Sau96I
                                >< NspIV
                                >< NspHII
                                >< NlaIII
                                >< Eco47I
                                >< Eam1105I
                                >< Cfr13I
                                >< BsiZI
                                >< Bme18I >< XcmI
                                >< AvalI      PleI ><
                                >< AfaI      >< AfaI
                                >< MaeIII      >< AluI      >< AsuI > < HinfI
GTACACACAC TGGTACAGGA CAGGCAATTA CTGTAACACC AGAAGCTAAC ATGGACCAAG AGTCCTTTGG
13100      13110      13120      13130      13140      13150      13160

                                >< TfiI
                                >< MaeIII
                                >< HinfI
TGGTGCTTCA TGGTGTCTGT ATTGTAGATG CCACATTGAC CATCCAAATC CTAAAGGATT CTGTGACTTG
13170      13180      13190      13200      13210      13220      13230

                                > < RsaI
                                >< MaeII
                                >< Csp6I
                                > < AfaI
                                >< BsrI      >< DdeI
AAAGGTAAGT ACGTCCAAAT ACCTACCACT TGTGCTAATG ACCCAGTGGG TTTTACACTT AGAAACACAG
13240      13250      13260      13270      13280      13290      13300

                                >< ThaI

```

FIGURE 13.30

```

                                >< SfaNI
                                >< MvnI
                                >< BstUI
                                >< Bsp50I
                                >< AciI
                                >< AccIISfaNI ><
>< RsaI
>< Csp6I
>< AfaI >< AciI
                                >< SfcI >< MaeIII
                                >< AccIISfaNI ><
TCTGTACCGT CTGCGGAATG TGGAAAGGTT ATGGCTGTAG TTGTGACCAA CTCGCGGAAC CCTTGATGCA
13310      13320      13330      13340      13350      13360      13370

                                >< Zsp2I
                                > < SfaNI
                                >< Mph1103I>< Tru9I
>< Ppu10I>< MaeII
                                >< NsiI> < FokI
                                >< EcoT22I >< MseI
                                >< Fnu4HI ><
                                >< BsgI ><
                                >< BbvI
>< AciI>< AvaIII >< DraI >< AciI >< Fnu4HI >< AciI ><
GTCTGCGGAT GCATCAACGT TTTTAAACGG GTTTGCGGTG TAAGTGCAGC CCGTCTTACA CCGTGC GGCA
13380      13390      13400      13410      13420      13430      13440

>< SpeI
>< ScaI
>< RsaI
>< RmaI
>< MaeI
> < Csp6I >< SfcI
                                >< BspWI
>< BspWI >< AfaI >< AccI >< BcgI/a >< BcgI >
CAGGCACTAG TACTGATGTC GTCTACAGGG CTTTGTATAT TTACAACGAA AAAGTTGCTG GTTTTGCAAA
13450      13460      13470      13480      13490      13500      13510

                                >< ScrFI
                                >< MvaI
                                >< MnlI
>< EcoRII
>< Ecl136I
>< BstOI
>< BstNI
>< BslI
>< DsaV >< BsiYI
>< BsiLI
>< ApyI
                                >< PleI
                                > < FokI >< HinfI
GTTCTAAAA ACTAATTGCT GTCGCTTCCA GGAGAAGGAT GAGGAAGGCA ATTTATTAGA CTCTTACTTT
13520      13530      13540      13550      13560      13570      13580

                                >< NlaIII
                                >< Ksp632I
                                >< EarI
                                >< Eam1104I
>< Tru9I
>< MseI
                                >< BsmAI
                                >< Tru9I
>< MnlI
                                >< Alw26I
                                >< MboII >< MseI
GTAGTTAAGA GGCATACTAT GTCTAACTAC CAACATGAAG AGACTATTTA TAACTTGGTT AAAGATTGTC
13590      13600      13610      13620      13630      13640      13650

                                >< RsaI
                                >< NlaIV
> < NlaIII
                                >< KpnI
                                >< HphI
> < Eco64I
>< Csp6I
>< BscBI
> < BanI
> < Asp718

```

FIGURE 13.31


```

>< NspBII
>< AciI
CAGCGGTTGC TGTCCATGAC TTTTCAAGT TTAGAGTAGA TGGTGACATG GTACCACATA TATCACGTCA
13660 13670 13680 13690 13700 13710 13720

>< MaeIII >< AfaI
> < AccBII MaeII ><
> < Acc65I > < HgaI
>< MnlI
>< MaeII
GCGTCTAACT AAATACACAA TGGCTGATTT AGTCTATGCT CTACGTCATT TTGATGAGGG TAATTGTGAT
13730 13740 13750 13760 13770 13780 13790

>< Tru9I
>< MseI >< MaeIII >< MunI
ACATTAAAAG AAATACTCGT CACATACAAT TGCTGTGATG ATGATTATTT CAATAAGAAG GATTGGTATG
13800 13810 13820 13830 13840 13850 13860

>< ThaI
>< MvnI
>< MluI
>< BstUI
>< Bsp50I
>< RsaI
>< HphI
>< TfiI >< AflIII >< DdeI >< Csp6I Tru9I ><
>< HinfI >< AccII >< BfrI >< AfaI MseI ><
ACTTCGTAGA GAATCCTGAC ATCTTACGCG TATATGCTAA CTTAGGTGAG CGTGTACGCC AATCATTATT
13870 13880 13890 13900 13910 13920 13930

XhoII >
Sau3AI >
NdeII >
MflI >
MboI >
DpnII >
BstYI >
BspAI >
> < SfaNI
>< RsaI
>< Csp6I
>< AfaI >< SfaNI
AAAGACTGTA CAATTCTGCG ATGCTATGCG TGATGCAGGC ATTGTAGGCG TACTGACATT AGATAATCAG
13940 13950 13960 13970 13980 13990 14000

> < ScrFI
> < MvaI
>< Fnu4HI
>< EcoRII
> < Ecl136I
> < BstOI
> < BstNI
>< Tru9I
>< MseI >< RsaI
>< DpnI >< Csp6I
>< Bsp143I >< BsrI
>< AlwI >< AfaI
GATCTTAATG GGAAGTGGTA CGATTTCCGGT GATTTCTGAC AAGTAGCACC AGGCTGCGGA GTTCCTATTG
14010 14020 14030 14040 14050 14060 14070

>< RmaI
> < HinfI
>< Fnu4HPIeI ><
>< DdeI
>< BspWI NdeI ><
TGGATTGATA TTAATCATTG CTGATGCCCA TCCTCACTTT GACTAGGGCA TTGGCTGCTG AGTCCCATAT
14080 14090 14100 14110 14120 14130 14140

>< Sau3AI
>< NdeII

```

FIGURE 13.32

```

>< MboI
>< MamI
>< DpnII
>< DpnI
>< BspWI
>< BspAI
>< Bsp143I
>< BsiBI
>< BsaBI >< FokI
GGATGCTGAT CTCGCAAAAC CACTTATTAA GTGGGATTG CTGAAATATG ATTTTACGGA AGAGAGACTT
14150      14160      14170      14180      14190      14200      14210

>< SinI
>< Sau96I
>< NspIV
>< NspHII
>< NlaIV
>< FokI
>< Eco47I
>< Cfr13I
>< BsiZI
>< Eam1104I >< SspI>< BscBI
>< BsmAI >< Tru9I >< Bme18I
>< MboII >< BsiEI> < MseI >< AvaII
>< Alw26I >< DraI >< AsuI >< MunI >< MseI
TGTCTCTTCG ACCGTTATTT TAAATATTGG GACCAGACAT ACCATCCCAA TTGTATTAAC TGTTTGGATG
14220      14230      14240      14250      14260      14270      14280

>< SinI ><
>< Sau96I ><
>< NspIV ><
>< NspHII >
>< Eco47I ><
>< Cfr13I ><
>< BsiZI ><
>< Bme18I ><
>< AvaII ><
>< AsuI ><
>< FokI >< Tru9I
>< MseI
ATAGGTGTAT CCTTCATTGT GCAAACCTTA ATGTGTTATT TTCTACTGTG TTTCCACCTA CAAGTTTTGG
14290      14300      14310      14320      14330      14340      14350

>< SpeI
>< RmaI
>< MaeI >< SspI
ACCACTAGTA AGAAAAATAT TTGTAGATGG TGTTCCTTTT GTTGTTCCTTCTGATACCA TTTTCGTGAG
14360      14370      14380      14390      14400      14410      14420

>< Thai>< Esp3I
>< DdeI
>< BstUI
>< Bsp50I >< BsmBI
>< MvnI>< BsmAI
>< HgaI>< AluI >< Alw26I
>< FokI >< AccII >< BbvI
TTAGGAGTCG TACATAATCA GGATGTAAAC TTACATAGCT CGCGTCTCAG TTTCAAGGAA CTTTTAGTGT
14430      14440      14450      14460      14470      14480      14490

>< Zsp2I
>< SphI
>< Ppu10I
>< PaeI
>< NspI

```

FIGURE 13.33

```

    >< Sau3AI          >< NspHI
    >< NdeII           >< NsiI
    >< MboI            >< NlaIII
    >< DpnII           >< Mph1103I
    > < DpnI          >< Fnu4HI
    >< Fnu4HI>< BspWI  >< EcoT22I
    >< BspAI           >< BspWI
    > < Bsp143I> < AvaIII > < AlwNI
    >< AlwI            >< AluI          >< AluI' >< BbvI >< RmaI          >< BspWI
    >< BbvI            >< MaeI          >< BsgI
    ATGCTGCTGA TCCAGCTATG CATGCAGCTT CTGGCAATTT ATTGCTAGAT AAACGCACTA CATGCTTTTC
    14500      14510      14520      14530      14540      14550      14560

    >< ScrFI
    >< NciI
    >< MspI
    >< HpaII
    >< HapII
    >< Fnu4HI
    >< AlwNI
    >< AluI
    >< DsaV            >< Tru9I
    >< BcnI            >< MseI
    AGTAGCTGCA CTAACAAACA ATGTTGCTTT TCAAAGTGTG AAACCCGGTA ATTTTAATAA AGACTTTTAT
    14570      14580      14590      14600      14610      14620      14630

    >< Tru9I
    >< MseI
    >< MboII
    >< DdeI ><
    GACTTTGCTG TGTCTAAAGG TTTCTTTAAG GAAGGAAGTT CTGTTGAACT AAAACACTTC TTCTTTGCTC
    14640      14650      14660      14670      14680      14690      14700

    >< FokI
    >< Fnu4HI
    >< EcoRV ><
    >< Eco32I ><
    AGGATGGCAA CGCTGCTATC AGTGATTATG ACTATTATCG TTATAATCTG CCAACAATGT GTGATATCAG
    14710      14720      14730      14740      14750      14760      14770

    >< VspI
    >< Tru9I
    >< MseI
    >< AsnI
    >< AseI
    >< MaeIII
    ACAAACCTCCTA TTCGTAGTTG AAGTTGTTGA TAAATACTTT GATTGTTACG ATGGTGGCTG TATTAATGCC
    14780      14790      14800      14810      14820      14830      14840

    >< Tru9I
    >< MseI
    >< HpaI
    >< HindII
    >< HincII
    >< PvuII
    >< Psp5I
    > < XcmI
    >< NspBII
    >< Tru9I
    >< RmaI ><
    >< AluI
    >< MseI
    >< MaeI ><
    AACCAAGTAA TCGTTAACAA TCTGGATAAA TCAGCTGGTT TCCCATTTAA TAAATGGGGT AAGGCTAGAC
    14850      14860      14870      14880      14890      14900      14910

    >< SfaNI
    >< Sau3AI
    >< NdeII
    >< MboI
    >< DpnII
    >< DpnI
    >< Bsp143I
    >< PleI
    >< HinfI>< MnlI
    >< BspAI >< AlwI
    >< BspWI >< FokI
    >< Bsp50I
    >< AccII>< DdeI
    >< AccI
    TTTATTATGA CTCAATGAGT TATGAGGATC AAGATGCACT TTTCGCGTAT ACTAAGCGTA ATGTCATCCC
    14920      14930      14940      14950      14960      14970      14980

    >< SstI
    >< SduI
    >< SacI

```

FIGURE 13.34

```

                                >< NspII
                                >< HgiAI
                                >< Eco24I
                                > < Ecl136II
                                >< Bsp1286I
                                >< BmyI
                                >< BanII
                                >< Alw21I
                                > < AluI
                                >< AluI
                                >< Tru9I
                                >< TfiI
                                >< MseI
                                >< HinfI
                                > < Esp4I
                                > < AflIII
                                >< BspWI
                                > < AluI
                                >< AluI
TACTATAACT CAAATGAATC TTAAGTATGC CATTAGTGCA AAGAATAGAG CTCGCACCGT AGCTGGTGTC
14990      15000      15010      15020      15030      15040      15050

                                RmaI ><
                                > < MnlI
                                MaeI ><
                                >< Fnu4HI
                                >< AciI
TCTATCTGTA GTACTATGAC AAATAGACAG TTTCATCAGA AATTATTGAA GTCAATAGCC GCCACTAGAG
15060      15070      15080      15090      15100      15110      15120

                                >< Tru9I
                                >< MseI
GAGCTACTGT GGTAATTGGA ACAAGCAAGT TTTACGGTGG CTGGCATAAT ATGTTAAAAA CTGTTTACAG
15130      15140      15150      15160      15170      15180      15190

                                NspI ><
                                NspHI ><
                                NlaIII ><
                                >< NlaIII
                                DdeI ><
                                BspWI ><
                                >< MaeIII
                                BfrI ><
TGATGTAGAA ACTCCACACC TTATGGGTTG GGATTATCCA AAATGTGACA GAGCCATGCC TAACATGCTT
15200      15210      15220      15230      15240      15250      15260

                                > < Pali
                                > < HaeIII
                                > < BsuRI
                                > < BshI
                                >< MnlI
                                >< MaeIII
                                SfcI ><
AGGATAATGG CCTCTCTTGT TCTTGCTCGC AAACATAACA CTTGCTGTAA CTTATCACAC CGTTTCTACA
15270      15280      15290      15300      15310      15320      15330

                                Tru9I ><
                                ScrFI >
                                MvaI >
                                >< MseI
                                FokI ><
                                EcoRII ><
                                Ecl136I >
                                DsaV ><
                                BstOI >
                                BstNI >
                                BsiLI >
                                ApyI >
                                >< MstI
                                >< HinfII
                                >< HinfI
                                > < HhaI
                                >< FspI
                                >< FdiII
                                > < CfoI>< Tru9I
                                >< NlaIII
                                > < Fnu4HI
                                >< AciI
                                >< AluI
                                >< AviII >< MseI
                                >< AciI
GGTTAGCTAA CGAGTGTGCG CAAGTATTAA GTGAGATGGT CATGTGTGGC GGCTCACTAT ATGTTAAACC
15340      15350      15360      15370      15380      15390      15400

                                > < SfaNI
                                >< MspI
                                >< HpaII
                                >< HapII
                                >< HphI
                                >< BspWI
                                >< Tru9I
                                MaeIII ><
                                >< MseI
                                AluI ><

```

FIGURE 13.35

```

AGGTGGAACA TCATCCGGTG ATGCTACAAC TGCTTATGCT AATAGTGTCT TTAACATTTG TCAAGCTGTT
15410      15420      15430      15440      15450      15460      15470

>< BspWI
ACAGCCAATG TAAATGCACT TCTTTCAACT GATGGTAATA AGATAGCTGA CAAGTATGTC CGCAATCTAC
15480      15490      15500      15510      15520      15530      15540

>< AluI
>< OrdI
>< AciI

>< Sau3AI
>< NdeII
>< MboI
> < MamI
>< FbaI
>< DpnII
>< DpnI
>< BspHI
>< BspAI
>< Bsp143I
>< BsiQI
>< SfcI
>< BsmAI
>< Alw26I
> < BsiBI>< NlaIII
> < BsaBI>< FokI
>< BclI>< EcoRI
FokI ><
AACACAGGCT CTATGAGTGT CTCTATAGAA ATAGGGATGT TGATCATGAA TTCGTGGATG AGTTTACGC
15550      15560      15570      15580      15590      15600      15610

>< TfiI
>< SfaNI
>< NlaIII
>< BspMI
>< HinfI
>< MaeIII
TTACCTGCGT AAACATTTCT CCATGATGAT TCTTTCTGAT GATGCCGTTG TGTGCTATAA CAGTAACTAT
15620      15630      15640      15650      15660      15670      15680

> < RmaI
>< NheI >< Tru9I
> < MaeI
>< Fnu4HI
>< AciI
>< AluI >< MseI >< MseI
>< Tru9I
MnlI ><
GCGGCTCAAG GTTTAGTAGC TAGCATTAAG AACTTTAAGG CAGTTCTTTA TTATCAAAAT AATGTGTTCA
15690      15700      15710      15720      15730      15740      15750

>< SinI
>< Sau96I
>< PssI
>< Psp5II
>< PpuMI
>< NspIV
>< NspHII
>< EcoO109I
>< Eco47I
>< DraII
>< Cfr13I
>< Bsi2I
>< Bme18I
>< AvaII
>< DdeI
>< NlaIII
>< BsmAI
>< DdeI
>< Alw26I
>< AsuI
>< MnlI
TGTCTGAGGC AAAATGTTGG ACTGAGACTG ACCTTACTAA AGGACCTCAC GAATTTTGCT CACAGCATAC
15760      15770      15780      15790      15800      15810      15820

>< XhoII
>< Sau3AI
>< NdeII
>< MflI
>< MboI

```

FIGURE 13. 36

```

                >< .RsaI                >< DpnII
                >< MaeII                >< DpnI    > < SspI
                >< Csp6I                >< BstYI    HinPII ><
                >< BsaAI                >< BspMI    Hin6I ><
                >< AflIII               >< BspAI    HhaI ><
                >< AfaI                >< AlwI>< Bsp143I CfoI ><
AATGCTAGTT AAACAAGGAG ATGATTACGT GTACCTGCCT TACCCAGATC CATCAAGAAT ATTAGGCGCA
15830      15840      15850      15860      15870      15880      15890

                >< RsaI                >< SfaNI
                >< Csp6I                >< MaeIII
                >< AfaI                BsrI ><
GGCTGTTTTG TCGATGATAT TGTCAAAACA GATGGTACAC TTATGATTGA AAGGTTCGTG TCACTGGCTA
15900      15910      15920      15930      15940      15950      15960

> < FokI
>< BspWI
TTGATGCTTA CCCACTTACA AAACATCCTA ATCAGGAGTA TGCTGATGTC TTCACTTGT ATTTACAATA
15970      15980      15990      16000      16010      16020      16030

                >< Van91I
                >< PflMI
                >< NspI
                > < Pali>< NspHI
                > < MscI>< NlaIII
                > < HaeIII
                > < BsuRI
                >< BsrI
                >< EaeI >< BslI >< NspI
                > < BshI>< BsiYI >< NspHI
                >< NlaIII                >< AflIII >< AflIII
                >< MaeIII                >< AluI > < BalI>< AccB7I >< NlaIII
CATTAGAAAG TTACATGATG AGCTTACTGG CCACATGTTG GACATGTATT CCGTAATGCT AACTAATGAT
16040      16050      16060      16070      16080      16090      16100

                >< RsaI> < NlaIV
                >< MnlI
                >< Csp6I                >< DdeI                >< RsaI
                >< BsrI >< MnlI                >< Csp6I
                >< AfaI> < BscBI                >< AfaI                SfcI ><
AACACCTCAC GGTACTGGGA ACCTGAGTTT TATGAGGCTA TGTACACACC ACATACAGTC TTGCAGGCTG
16110      16120      16130      16140      16150      16160      16170

                >< NlaIV
                >< EcoNI
                >< Eco31I
                >< Eco64I>< BsmAI
                >< BscBI >< BslI
                >< Bani >< BsiYI
                >< AciI >< BsaI
                >< AccB1I>< Alw26I BbvI ><
TAGGTGCTTG TGTATTGTGC AATTCACAGA CTTCACTTCG TTGCGGTGCC TGTATTAGGA GACCATTCTT
16180      16190      16200      16210      16220      16230      16240

                >< Tth111I
                >< Fnu4HI                >< NlaIII
                >< BspWI >< AspI                > < Tru9I
                >< BspWI >< AspI                > < MseI
ATGTTGCAAG TGCTGCTATG ACCATGTCAT TTCAACATCA CACAAATTAG TGTTGTCTGT TAATCCCTAT
16250      16260      16270      16280      16290      16300      16310

                >< ScrFI
                >< MvaI

```

FIGURE 13.37

```

>< EcoRII
>< Ecl136I
>< DsaV
>< BstOI
>< BstNI
>< BsiLI
>< BsaJI
>< RmaI
>< MnlI
BspWI ><
>< ApyI >< MaeIII >< MaeIII >< MaeI >< AluI
GTTTGCAATG CCCAGGTTG TGATGTCACT GATGTGACAC AACTGTATCT AGGAGGTATG AGCTATTATT
16320 16330 16340 16350 16360 16370 16380

>< MaeIII >< MnlI
GCAAGTCACA TAAGCCTCCC ATTAGTTTTTC CATTATGTGC TAATGGTCAG GTTTTGGTT TATACAAAAA
16390 16400 16410 16420 16430 16440 16450

>< NspI >< NspI
>< NspHI >< Tth111I >< NspHI
>< NlaIII>< MaeIII>< MaeIII >< NlaIII
>< AflIII >< AspI >< AflIII
CACATGTGTA GGCAGTGACA ATGTCACTGA CTTCAATGCG ATAGCAACAT GTGATTGGAC TAATGCTGGC
16460 16470 16480 16490 16500 16510 16520

>< RsaI
>< P1eI
>< DdeI
>< Csp6I
>< BsmAI >< HinfI >< MnlI
>< Alw26I >< HindIII DdeI ><
>< AfaI >< AluI >< Fnu4HI >< BbvI
GATTACATAC TTGCCAACAC TTGTACTGAG AGACTCAAGC TTTTCGCAGC AGAAACGCTC AAAGCCACTG
16530 16540 16550 16560 16570 16580 16590

>< ThaI
>< ScaI
>< RsaI >< RsaI
>< MvnI
>< Csp6I >< Csp6I
>< BstUI
>< Bsp50I
>< Tru9I >< AfaI >< AfaI
>< MseI >< NdeI >< AccII MnlI >
AGGAAACATT TAAGCTGTCA TATGGTATTG CCACTGTACG CGAAGTACTC TCTGACAGAG AATTGCATCT
16600 16610 16620 16630 16640 16650 16660

MaeIII ><
>< MaeIII
>< EcoO65I
>< Eco91I
>< BstPI
>< BstEII
>< BsrI

>< SfaNI >< RmaI
>< NlaIII >< MaeI
TTCATGGGAG GTTGAAAAAC CTAGACCACC ATTGAACAGA AACTATGTCT TTA CTGGTTA CCGTGTAACT
16670 16680 16690 16700 16710 16720 16730

RsaI ><
>< MnlI
>< HphI
>< Csp6I >< Csp6I >< SfaNI Csp6I ><
>< AfaI >< AfaI >< MaeIII >< HphI AfaI ><
AAAAATAGTA AAGTACAGAT TGGAGAGTAC ACCTTTGAAA AAGGTGACTA TGGTGATGCT GTTGTGTACA
16740 16750 16760 16770 16780 16790 16800

```

FIGURE 13. 38

```

    >< RsaI
    >< Csp6I
    >< AfaI
GAGGTACTAC GACATACAAG TTGAATGTTG GTGATTACTT TGTGTTGACA TCTCACA CTG TAATGCCACT
16810      16820      16830      16840      16850      16860      16870

    >< VneI
    >< SnoI
    >< SduI
    >< NspII
    >< HgiAI
    >< DraIII
    >< Bsp1286I
    >< BmyI
    >< ApaLI
    >< Alw44I
    >< Alw21I
    >< RmaI
    >< MaeI
    >< BspWI
    >< DraIII
    >< Bsp1286I
    >< BmyI
    >< Alw21I
    >< RsaI
    >< Csp6I
    >< BsrI
    >< AfaI
    DdeI >
TAGTGACCT ACTCTAGTGC CACAAGAGCA CTATGTGAGA ATTACTGGCT TGTACCCAAC ACTCAACATC
16880      16890      16900      16910      16920      16930      16940

    StyI ><
    SinI >
    Sau96I >
    NspIV >
    EcoT14I ><
    Eco47I >
    Eco130I ><
    >< ScaI Cfr13I >
    BssT1I ><
    >< SphI >< RsaI BsiZI >
    >< PaeI BsaJI ><
    >< NlaIII Bme18I >
    >< NspI>< Csp6I AvaII >
    >< NspHI>< AfaI AsuI >
    >< RmaI
    >< MaeI
TCAGATGAGT TTTCTAGCAA TGTGCAAAT TATCAAAAGG TCGGCATGCA AAAGTACTCT AACTCCAAG
16950      16960      16970      16980      16990      17000      17010

    >< ScrFI
    >< RsaI
    >< MvaI
    >< EcoRII
    >< Ecl136I
    >< Csp6I
    >< BstOI
    >< BstNI
    >< XcmI >< BslI
    >< NspHII >< BsiYI
    >< BsiLI
    >< ApyI >< BsrI
    >< DsaV>< AfaI >< HinfI>< P1eI
GACCACCTGG TACTGGTAAG AGTCATTTTG CCATCGGACT TGCTCTCTAT TACCCATCTG CTCGCATAGT
17020      17030      17040      17050      17060      17070      17080

    >< SfaNI
    >< SphI >< PvuII
    >< PaeI >< Psp5I
    >< NspI >< NspBII
    >< NspHI >< Fnu4HI
    >< Bst1107I >< NlaIII>< BspWI >< Tru9I >< SspI
    >< AccI >< NlaIII >< AluI >< BbvI >< MseI
GTATACGGCA TGCTCTCATG CAGCTGTTGA TGCCCTATGT GAAAAGGCAT TAAATATTTT GCCCATAGAT
17090      17100      17110      17120      17130      17140      17150

```

FIGURE 13.39


```

> < ThaI
>< ThaI
> < MvnI
>< MvnI >< ThaI
> < HinPII
>< HinPII
>< HinPII >< MvnI
> < Hin6I
>< Hin6I
> < HhaI
>< HhaI >< HhaI
> < CfoI
>< CfoI >< CfoI
> < BstUI
>< BstUI >< BstUI
>< BssHII
>< BspMI
> < Bsp50I
>< Bsp50I>< Bsp50I
>< TfiI >< Hin6I> < AccII
>< HinfI >< AccII >< AccII
>< EcoRI
AAATGTAGTA GAATCATACC TGCGCGTGCG CGCGTAGAGT GTTTGTGATAA ATTCAAAGTG AATTCAACAC
17160 17170 17180 17190 17200 17210 17220

>< Zsp2I
>< Ppu10I
>< NsiI
>< Mph1103I
>< EcoT22I
>< BsgI > < AvaIII >< DrdI
TAGAACAGTA TGTTTTCTGC ACTGTAAATG CATTGCCAGA AACAACTGCT GACATTGTAG TCTTTGATGA
17230 17240 17250 17260 17270 17280 17290

>< RmaI
>< MaeI >< MaeII
AATCTCTATG GCTACTAATT ATGACTTGAG TGTTGTCAAT GCTAGACTTC GTGCAAAACA CTACGTCTAT
17300 17310 17320 17330 17340 17350 17360

>< Sau3AI
>< NdeII
>< MboI
>< DpnII
>< DpnI
>< BspAI
>< AlwI>< Bsp143I > < AciI >< RmaI
>< MaeI SspI ><
ATTGGCGATC CTGCTCAATT ACCAGCCCCC CGCACATTGC TGAATAAGG CACACTAGAA CCAGAATATT
17370 17380 17390 17400 17410 17420 17430

>< SinI
>< Sau96I
>< NspIV >< StyI
>< NspHII >< NspI
>< Eco47I >< NspHI
>< Cfr13I >< NlaIII
>< Bsi2I >< EcoT14I
>< BsgI >< Eco130I
>< Bme18I >< BssT1I
>< AvaII >< BsaJI
>< AsuI> < AflIII
TTAATTCAGT GTGCAGACTT ATGAAAACAA TAGGTCCAGA CATGTTCCCTT GGAAGTGTGC GCCGTTGTCC
17440 17450 17460 17470 17480 17490 17500

```

FIGURE 13. 40

```

      >< HindII
      >< HincII
      >< AluI
TGCTGAAATT GTTGACACTG TGAGTGCTTT AGTTTATGAC AATAAGCTAA AAGCACACAA GGATAAGTCA
17510      17520      17530      17540      17550      17560      17570

>< AluI
GCTCAATGCT TCAAAATGTT CTACAAAGGT GTTATTACAC ATGATGTTTC ATCTGCAATC AACAGACCTC
17580      17590      17600      17610      17620      17630      17640

      >< MnlI
>< EcoNI
      >< BslI
      >< BsiYI
      >< HphI
      >< AluI
AAATAGGCGT TGTAAGAGAA TTTCTTACAC GCAATCCTGC TTGGAGAAAA GCTGTTTTTA TCTCACCTTA
17650      17660      17670      17680      17690      17700      17710

      >< SfcI
      >< DdeI
      >< TfiI
      >< AluI
      >< BfrI
      >< HinfI
TAATTCACAG AACGCTGTAG CTTCAAAAAT CTTAGGATTG CCTACGCAGA CTGTTGATTC ATCACAGGGT
17720      17730      17740      17750      17760      17770      17780

      >< Tth111I
      >< AspI
      >< HindII
      >< HincII
      >< AciI
TCTGAATATG ACTATGTCAT ATTCACACAA ACTACTGAAA CAGCACACTC TTGTAATGTC AACCCTTCA
17790      17800      17810      17820      17830      17840      17850

      >< XhoII
      >< Sau3AI
      >< NdeII
      >< MflI
      >< MboI
      >< MamI
      >< DpnII
      >< DpnI
      >< BstYI
      >< BspAI
      >< Bsp143I
      >< BsiBI
      >< BsaBI
      >< BglII
      >< BspWI
ATGTGGCTAT CACAAGGGCA AAAATTGGCA TTTTGTGCAT AATGTCTGAT AGAGATCTTT ATGACAACT
17860      17870      17880      17890      17900      17910      17920

      >< XbaI
      >< RmaI
      >< MaeI
      >< MaeII
      >< MaeIII
      >< BsrI ><
GCAATTTACA AGTCTAGAAA TACCACGTCG CAATGTGGCT ACATTACAAG CAGAAAATGT AACTGGACTT
17930      17940      17950      17960      17970      17980      17990

      >< Sau3AI
      >< NdeII
      >< MboII
      >< MboI
      >< FokI
      >< DpnII
      >< DpnI
      >< BspAI
      >< Bsp143I
      >< BbsI >< BsrI
      >< NlaIV
      >< Eco64I
      >< BscBI
      >< Bani
      >< AccBI
      >< MnlI ><
      >< DdeI
>< Tru9I
>< MseI>< SfcI

```

FIGURE 13. 41

```

>< ScrFI
>< MvaI
>< EcoRII
>< Eco57I
>< Ecl136I
>< DsaV
>< BstOI
>< BstNI
>< HindII>< BsiLI
>< HincII>< ApyI
TAAAGTTCAA GACTGAAGGA TTATGTGTTG ACATACCAGG CATACCAAG GACATGACCT ACCGTAGACT
18070      18080      18090      18100      18110      18120      18130
>< MaeIII
>< EcoO65l
>< Eco9lI
>< BstXI
>< BstPI
>< BstEII
CATCTCTATG ATGGGTTTTCA AAATGAATTA CCAAGTCAAT GGTTACCCCTA ATATGTTTTAT CACCGCGGAA
18140      18150      18160      18170      18180      18190      18200
>< XmnI
>> < MboII
>> < MaeIII
>< Asp700I
>< AluI >< MaeII
>< MnII
GAAGCTATTG GTCACGTTCG TGC GTGGATT GGCTTTGATG TAGAGGGCTG TCATGCAACT AGAGATGCTG
18210      18220      18230      18240      18250      18260      18270
>< Tru9I
>< MseI
>< RsaI
>< HpaI
>< RmaI
>< HindII
>< HincII
>< DdeI
>< BfrI
>< SfcI
TGGGTAATA CCTACCTCTC CAGTAGGAT TTTCTACAGG TGTTAACTTA GTAGCTGTAC CGACTGGTTA
18280      18290      18300      18310      18320      18330      18340
>< ScrFI
>< MvaI
>< MnII
>< MaeIII
>< EcoRII
>< EcoO65l
>< EcoNI
>< Eco9lI
>< Ecl136I
>< DsaV
>< Tru9I
>< DraII
>< BstPI
>< BstOI
>< BstNI
>< PmeI
>< BstEII
>< BslI
>< MseI
>< BsiYI
>< HphI
>< BsiII
>< DraI
>< ApyI
>< BsrI
>< HindII
>< HincII
>< HphI
>< EcoRI
>< Tru9I
>< MseI
```

FIGURE 13.42

```

TGTGACACT GAAAATAACA CAGAATTCAC CAGAGTTAAT GCAAAACCTC CACCAGGTGA CCAGTTTAAA
18350      18360      18370      18380      18390      18400      18410

      >< ScrFI
      >< MvaI
      >< EcoRII
      >< Ecl136I
      >< DsaV
      >< BstOI
      >< BstNI
      >< BsiLI
      >< BsaJI
      >< NlaIII
      >< ApyI
      >< RsaI
      >< DdeI ><
      >< Tru9I>< Csp6I
      >< MseI >< AfaI
CATCTTATAC CACTCATGTA TAAAGGCTTG CCCTGGAATG TAGTGCGTAT TAAGATAGTA CAAATGCTCA
18420      18430      18440      18450      18460      18470      18480

      >< NlaIII
      >< Tth111I
      >< HinfI
      >< AspI
      >< PheI
      >< CfoI
      >< AluI
GTGATACACT GAAAGGATTG TCAGACAGAG TCGTGTTCGT CCTTTGGGCG CATGGCTTTG AGCTTACATC
18490      18500      18510      18520      18530      18540      18550

      >< SinI
      >< Sau96I
      >< NspIV
      >< NspHII
      >< Eco47I
      >< Cfr13I
      >< ScaI
      >< RsaI
      >< Csp6I
      >< AfaI
      >< BsiZI
      >< Bme18I
      >< AvaII
      >< AsuI
      >< MaeII
      >< AflIII
      >< MaeIII>< MaeII
AATGAAGTAC TTTGTCAAGA TTGGACCTGA AAGAACGTGT TGTCTGTGTG ACAAACGTGC AACTTGCTTT
18560      18570      18580      18590      18600      18610      18620

      >< TfiI
      >< HinfI
      >< Tth111I
      >< AspI
TCTACTTCAT CAGATACTTA TGCCTGCTGG AATCATTCTG TGGGTTTGA CTATGTCTAT AACCCATTTA
18630      18640      18650      18660      18670      18680      18690

      >< ScrFI
      >< RsaI ><
      >< MvaI
      >< EcoRII
      >< Ecl136I ><
      >< DsaV
      >< Csp6I ><
      >< BstXI ><
      >< BstOI
      >< BstNI
      >< BsiLI
      >< ApyI
      >< MaeIII
      >< Eco065I
      >< Eco91I
      >< BstPI
      >< Eco57I>
      >< BstEII
      >< MaeIII >< NlaIII
      >< AfaI ><
TGATTGATGT TCAGCAGTGG GGCTTTACGG GTAACCTTCA GAGTAACCAT GACCAACATT GCCAGGTACA
18700      18710      18720      18730      18740      18750      18760

      >< SfaNI
      >< RmaI
      >< NspI
      >< NspHI

```

FIGURE 13.43

```

      >> NlaIII
      >> MaeI
>> NlaIII >> BspWI >> RmaI >> NlaIII Tru9I >>
      > < AflIII >> BspHI >> MaeI >> NlaIII MseI >>
TGGAAATGCA CATGTGGCTA GTTGTGATGC TATCATGACT AGATGTTTAG CAGTCCATGA GTGCTTTGTT
18770 18780 18790 18800 18810 18820 18830

>> Thai
>> MvnI
>> HinPII
>> Hin6I
>> HhaI
>> CfoI
>> BstUI
>> Bsp50I >> EcoNI > < MnlI
>> AccII >> BslI >> Tru9I
>> BsiYI >> DdeI >> MseI
AAGCGCGTTG ATTGGTCTGT TGAATACCCT ATTATAGGAG ATGAAGTGA GGTAAATTCT GCTTGCAGAA
18840 18850 18860 18870 18880 18890 18900

>> RsaI
>> Csp6I
>> AfaI >> NlaIII >> BspWI >> MboII > < NlaIII
AAGTACAACA CATGGTTGTG AAGTCTGCAT TGCTTGCTGA TAAGTTTCCA GTTCTTCATG ACATTGAAAA
18910 18920 18930 18940 18950 18960 18970

>> SauI
>> MstII
>> Eco81I
>> DdeI
>> CvnI NlaIII >>
>> Bsu36I >> EspI
>> Bse21I >> Eco57I MaeIII >>
>> AxyI >> DdeI
>> AocI >> MnlI >> SfaNI >> CelII
>> Bpu1102I
TCCAAAGGCT ATCAAGTGTG TGCCTCAGGC TGAAGTAGAA TGGAAGTTCT ACGATGCTCA GCCATGTAGT
18980 18990 19000 19010 19020 19030 19040

>> MnlI
>> HindIII >> Ksp632I
>> AluI >> MboII >> EarI
>> Eam1104I
GACAAAGCTT ACAAATAGA GGAAGTCTTC TATTCTTATG CTACACATCA CGATAAATTC ACTGATGGTG
19050 19060 19070 19080 19090 19100 19110

>> Sau3AI
>> NdeII
>> MboI
>> MaeII > < MaeIII
>> DpnII
>> DpnI
>> BspAI
>> MaeIII >> Bsp143I >> MunI HinfI >
>> DrdI >>
TTGTTTGTGTT TTGGAATTGT AACGTTGATC GTTACCCAGC CAATGCAATT GTGTGTAGGT TTGACACAAG
19120 19130 19140 19150 19160 19170 19180

Zsp2I >>
>> SphI
> < Ppu10I
>> PaeI
>> NspI
>> NspHI
>> NlaIII
>> ScrFI
>> MvaI
>> EcoRII Mph1103I >>

```

FIGURE 1344

58/116.

```

                >< Ecl136I
                >< DsaV
                >< BstOI
                >< BstNI
                >< BsiLI
                >< ApyI
                >< PleI
AGTCTTGTCA AACTTGAAC TACCAGGCTG TGATGGTGGT AGTTTGTATG TGAATAAGCA TGCATTCCAC
19190      19200      19210      19220      19230      19240      19250

                >< Tru9I
                > < MunI
                >< TthHB8I
                >< BcgI/a >< TaqI
                >< AluI
                >< MseI
                >< DraI
                >< BcgI
ACTCCAGCTT TCGATAAAAG TGCATTTACT AATTAAAGC AATTGCCTTT CTTTACTAT TCTGATAGTC
19260      19270      19280      19290      19300      19310      19320

                >< PleI
                >< NlaIII
                >< BsmAI
                >< HinfI>< Alw26I
                SfaNI ><
                >< MaeII
                BsaAI ><
                AflIII ><
CTTGTGAGTC TCATGGCAA CAAGTAGTGT CGGATATTGA TTATGTTCCA CTCAAATCTG CTACGTGTAT
19330      19340      19350      19360      19370      19380      19390

                Zsp2I >
                >< ScaI
                Ppu10I ><
                >< RsaINsiI >
                Mph1103I >
                >< SfaNEcoT22I >
                > < RsaI >< Csp6I
                >< Csp6I
                >< NlaIII> < AfaI >< AfaI
TACACGATGC AATTAGGTG GTGCTGTTTG CAGACACCAT GCAAATGAGT ACCGACAGTA CTTGGATGCA
19400      19410      19420      19430      19440      19450      19460

                >< FokI
TATAATATGA TGATTCTGC TGGATTAGC CTATGGATT ACAAACAATT TGATACTTAT AACCTGTGGA
19470      19480      19490      19500      19510      19520      19530

                >< ScrFI
                >< MvaI
                >< MaeIII
                >< EcoRII
                >< Ecl136I
                >< DsaV
                >< BstOI
                >< BstNI
                >< BsiLI
                >< ApyI
                >< Tru9I
                >< MseI
ATACATTTAC CAGGTTACAG AGTTTAGAAA ATGTGGCTTA TAATGTTGTT AATAAAGGAC ACTTTGATGG
19540      19550      19560      19570      19580      19590      19600

                >< SgrAI
                >< NaeI
                >< MspI
                >< HpaII
                >< HapII
                >< Cfr10I
                >< BspWI
                > < VspI
                > < Tru9I
                > < MseI
                > < AsnI
                > < AseI
ACACGCCGGC GAAGCACCTG TTTCCATCAT TAATAATGCT GTTACACAA AGGTAGATGG TATTGATGTG
19610      19620      19630      19640      19650      19660      19670

```

FIGURE 13. 45

```

>< XhoII
>< Sau3AI
>< NdeII
>< MflI
>< MboI
>< DpnII
  >< DpnI
>< BstYI
>< BspAI
  >< Bsp143I
>< BglII
GAGATCTTTG AAAATAAGAC AACACTTCCT GTTAATGTTG CATTGAGCT TTGGGCTAAG CGTAACATTA
19680      19690      19700      19710      19720      19730      19740

                                >< MaeIII
                                >< EspI
                                >< DdeITru9I ><
                                >< CeliIMseI ><
                                >< Bpu1102I
                                >< AluI
                                >< Fnu4HI
                                >< EcoRV
                                >< Eco32I
                                >< BbvI
                                >< BsrI
                                >< MseI
                                >< Tru9I
AACCAGTGCC AGAGATTAAG ATACTCAATA ATTTGGGTGT TGATATCGCT GCTAATACTG TAATCTGGGA
19750      19760      19770      19780      19790      19800      19810

                                >< NspI
                                >< NspHI
                                >< NlaIII
                                >< BsgI
                                >< AflIII
CTACAAAAGA GAAGCCCCAG CACATGTATC TACAATAGGT GTCTGCACAA TGA CTGACAT TGCCAAGAAA
19820      19830      19840      19850      19860      19870      19880

                                >< DdeI>< MboII
                                >< AccI
CCTACTGAGA GTGCTTGTTT TCACTTACT GTCTTGTTTG ATGGTAGAGT GGAAGGACAG GTAGACCTTT
19890      19900      19910      19920      19930      19940      19950

                                SinI ><
                                Sau96I ><
                                NspIV ><
                                NspHII ><
                                NlaIV ><
                                Eco47I ><
                                Cfr13I ><
                                >< BslI
                                Bsi2I ><
                                >< BsiYI
                                BscBI ><
                                Bme18I ><
                                AvaII ><
                                AsuI ><
                                >< Tru9I
                                >< MseI
TTAGAAACGC CCGTAATGGT GTTTTAATAA CAGAAGGTTT AGTCAAAGGT CTAACACCTT CAAAGGGACC
19960      19970      19980      19990      20000      20010      20020

                                >< VspI
                                >< Tru9I
                                >< PleI
                                >< MseI
                                >< RmaI
                                >< NheI
                                >< MaeI
                                >< MaeIII
                                >< AsnI
                                >< TfiI
                                >< HinfI>< AseI
                                >< HinfI
                                >< MseI
                                >< Tru9I ><
                                >< Tru9I
                                >< MseI ><
                                >< MseI
AGCACAAGCT AGCGTCAATG GAGTCACATT AATTGGAGAA TCAGTAAAAA CACAGTTTAA CTACTTTAAG
20030      20040      20050      20060      20070      20080      20090

                                >< DdeI
                                >< MnlI
                                >< Tru9I ><
                                >< BsmAI
                                >< DdeI

```

FIGURE 1346

FIGURE 13.47

61/116

```

    >> Tth111I
    >> TaqI
    >> AspI          > < MaeIII          MaeIII >>
TTTACTTGAT GACTTTGTG AGATAATAAA GTCACAAGAT TTGTCAGTGA TTTCAAAAGT GGTCAAGGTT
  20450      20460      20470      20480      20490      20500      20510

                                >> NspI
                                >> NspHI
                                >> NlaIII
                                >> FokI

    >> MunI          > < NlaIII          >> AflIII
ACAATTGACT ATGCTGAAAT TTCATTATG CTTTGGTGTA AGGATGGACA TGTGAAACC TTCTACCCAA
  20520      20530      20540      20550      20560      20570      20580

                                >> SfaNI
                                >> ScrFI
                                >> MvaI
                                >> EcoRII
                                >> Ecl136I
                                >> DsaV
                                >> BstOI          >> SfaNI
                                >> BstNI          >> RsaI   BspWI >>
                                >> BsiLI          > < Csp6I   BsmI >
                                >> ApyI          >> AfaI   BscCI >>
    >> BspWI          >> ApyI
AACTACAAGC AAGTCAAGCG TGGCAACCAG GTGTTGCGAT GCCTAACTTG TACAAGATGC AAAGAATGCT
  20590      20600      20610      20620      20630      20640      20650

    >> Eco57I >> MaeIII          >> HphI
TCTTGAAAAG TGTGACCTTC AGAATTATGG TGAAAATGCT GTTATACCAA AAGGAATAAT GATGAATGTC
  20660      20670      20680      20690      20700      20710      20720

                                > < RsaI
                                >> Csp6I

    >> Bst1107I          >> Tru9I          >> AluI
    >> AccI          >> MseI          > < AfaINlaIII ><
GCAAAGTATA CTCAACTGTG TCAATACTTA AATACACTTA CTTTAGCTGT ACCCTACAAC ATGAGAGTTA
  20730      20740      20750      20760      20770      20780      20790

                                >> ScrFI
                                >> RsaI
                                >> MvaI
                                >> EcoRII >> NspBII
                                >> Ecl136I          >> SduI
                                > < Csp6I          >> NspII
                                >> BstOI >> PvuII >> HgiAI
                                >> BstNI          >> DdeI
                                >> BsiLI >> Psp5I >> Bsp1286I
                                >> ApyI >> AluI >> BmyI
                                >> DsaV >> AfaI          >> Alw21I
TTCACCTTTGG TGCTGGCTCT GATAAAGGAG TTGCACCAGG TACAGCTGTG CTCAGACAAT GGTGCCAAC
  20800      20810      20820      20830      20840      20850      20860

    >> XhoII
    >> Tru9I
    >> Sau3AI
    >> NdeII
    >> TthHB8I >> MseI
    >> MflI
    >> MboI
    >> MamI
    >> DpnII
    >> TfiI >> DpnI

```

FIGURE 13. 48

```

      >< BstYI      > < TfiI
      >< BspAI      > < HinfI
    >< HinfI>< Bsp143I    >< Esp3I    >< Tru9I
      >< BsiBI    >< Tth111I    >< BsmBI    >< MseI
      >< BsaBI    >< BsmAI    > < BsmAI
    >< BsrI    >< TaqI >< BglII    >< AspI    >< Alw26I >< HgaI> < Alw26I
TGGCACACTA CTTGTCGATT CAGATCTTAA TGACTTCGTC TCCGACGCAG ATTCTACTTT AATTGGAGAC
    20870      20880      20890      20900      20910      20920      20930

      >< StyI
      >< SinI
      >< Sau96I
    > < SinI
    > < Sau96I
      >< PssI
    >< Psp5II
    > < PpuMI
    > < NspIV
      >< NspHII
      >< NlaIV
    > < EcoO109I
    > < Eco47I
    > < DraII
    > < Cfr13I
    > < BsiZI
      >< BscBI
    > < Bme18I
    > < AvaII
    > < Csp6I
    >< AfaI
      >< RsaI
      > < Bme18I
      > < AvaII
      > < AsuI
    >< AsuI
    >< BscBI
    >< Bme18I
    >< AvaII
    >< AsuI
    >< AflIII ><
TGTCGAACAG TACATACGGC TAATAAATGG GACCTTATTA TTAGCGATAT GTATGACCCT AGGACCAAAC
    20940      20950      20960      20970      20980      20990      21000

    >< NspI
    >< NspHI
    >< NlaIII >< PleI
    >< MaeIII
    >< HinfI
    >< RmaI ><
    >< MaeI ><
ATGTGACAAA AGAGAATGAC TCTAAAGAAG GGTTTTTTCAC TTATCTGTGT GGATTATATA AGCAAAACT
    21010      21020      21030      21040      21050      21060      21070

    >< ScrFI
    >< MvaI
    >< EcoRII
    >< Ecl136I
    >< DsaV
    >< BstOI
    >< BstNI
    >< BsiLI
    >< BsaJI
    >< BsaJI
    >< SfcI
    >< BsmI
    >< BsmI
    >< ApyI
    > < AluI
    >< BscCI
    >< BscCIHindIII >< >< AluI
AGCCCTGGGT GGTCTATAG CTGTAAAGAT AACAGAGCAT TCTTGGAATG CTGACCTTTA CAAGCTTATG
    21080      21090      21100      21110      21120      21130      21140

      >< Zsp2I
    >< Ppu10I
    >< NsiI
    >< Mph1103I
    >< EcoT22I
    >< Tru9I ><
    >< MseI
    >< BsuRI
    >< BshI
    >< NlaIII>< AluI
    >< BcgI
    >< AvaIII >< SfaNIBcgI/a ><
GGCCATTCT CATGGTGGAC AGCTTTTGT ACAAATGTAA ATGCATCATC ATCGGAAGCA TTTTAATTG
    21150      21160      21170      21180      21190      21200      21210

```

FIGURE 13.49

```

                                >< Zsp2I
                                >< SphI
                                >< Ppu10I
                                >< PaeI
                                >< NspI
                                >< NspHI
                                >< NsiI
                                >< NlaIII
                                > < NlaIII
                                >< Mph1103I
                                >< EcoT22I
                                > < AvaIII
                                >< MnlI
GGGCTAACTA TCTTGGCAAG CCGAAGGAAC AAATTGATGG CTATACCATG CATGCTAACT ACATTTTCTG
  21220      21230      21240      21250      21260      21270      21280

                                >< MboII
                                >< GsuI
                                >< BsrI
                                >< BpmI
                                >< BbsI
                                >< NlaIII
                                >< MnlI
GAGGAACACA AATCCTATCC AGTTGTCTTC CTATTCACCTC TTGACATGA GCAAATTTCC TCTTAAATTA
  21290      21300      21310      21320      21330      21340      21350

                                >< Tru9I
                                >< MseI
                                >< Esp4I> < TfiI
                                >< BsmAI
                                >< Alw26I
                                >< AflIII> < HinfI
                                >< MboII
                                >< EarI
AGAGGAACTG CTGTAATGTC TCTTAAGGAG AATCAAATCA ATGATATGAT TTATTCTCTT CTGGAAAAAG
  21360      21370      21380      21390      21400      21410      21420

                                >< Tru9I
                                >< MseI
                                >< HindII
                                >< HincII
                                >< HpaI AflIII >
GTAGGCTTAT CATTAGAGAA AACAAACAGAG TTGTGGTTTC AAGTGATATT CTTGTTAACA ACTAAACGAA
  21430      21440      21450      21460      21470      21480      21490

                                >< VneI
                                >< SnaI
                                >< SduI
                                >< NspII
                                >< HpaII
                                >< HgiAI
                                >< HapII
                                >< Cfr10I
                                >< Bsp1286I
                                >< MspI>< BmyI
                                >< ApaLI
                                >< Alw44I
                                >< AgeI >< Alw21I
X NspI                                >< SpeI
X NspHI                                >< RmaI
X NlaIII                                >< MaeI >< MaeIII >< AgeI >< Alw21I
CATGTTTATT TTCTTATTAT TTCTTACTCT CACTAGTGGT AGTGACCTTG ACCGGTGCAC CACTTTTGTAT
  21500      21510      21520      21530      21540      21550      21560

                                > < AluI
                                >< MnlI
GATGTTCAAG CTCCTAATTA CACTCAACAT ACTTCATCTA TGAGGGGGGT TTACTATCCT GATGAAATTT
  21570      21580      21590      21600      21610      21620      21630

                                >< Sau3AI

```

FIGURE 13. 50

```

>< NdeII
>< MboI
>< DpnII
  >< DpnI
>< BspAI
  >< Bsp143I
    TTAGATCAGA CACTCTTTAT TTAAGTCAGG ATTTATTTCT TCCATTTTAT TCTAATGTGA CAGGGTTTCA
    21640      21650      21660      21670      21680      21690      21700

  >< VspI
  >< Tru9I
  >< MseI
  >< AsnI
  >< AseI >< MaeII
    TACTATTAAT CATACGTTTG GCAACCCTGT CATACCTTTT AAGGATGGTA TTTATTTTGC TGCCACAGAG
    21710      21720      21730      21740      21750      21760      21770

    >< BslI
    >< DsaI>< BsiYI
    >< BsaJI
    AAATCAAATG TTGTCCGTGG TTGGGTTTTT GGTTCACCA TGAACAACAA GTCACAGTCG GTGATTATTA
    21780      21790      21800      21810      21820      21830      21840

    >< NspI
    >< NspHI
    >< MseI
    >< HphI
    >< NlaIII
    >< MaeIII
    TTAACAATTC TACTAATGTT GTTATACGAG CATGTAACCT TGAATTGTGT GACAACCCTT TCTTTGCTGT
    21850      21860      21870      21880      21890      21900      21910

    >< StyI
    >< NlaIII
    >< NcoI >< RsaI
    >< EcoT14I
    >< Eco130I
    >< DsaI>< Csp6I
    >< BssT1I
    >< BsaJI>< AfaI
    >< Zsp2I
    >< Tru9I
    >< Ppu10I TthHB8I ><
    >< NsiI >< TaqI
    >< MseI SfaNI ><
    >< Mph1103I RsaI ><
    >< TthHB8I >< EcoT22I Csp6I ><
    >< TaqI >< AvaIII AfaI ><
    TTCTAAACCC ATGGGTACAC AGACACATAC TATGATATTC GATAATGCAT TTAATTGCAC TTTCGAGTAC
    21920      21930      21940      21950      21960      21970      21980

    >< Tru9I
    >< MseI
    >< DraI
    ATATCTGATG CCTTTTCGCT TGATGTTTCA GAAAAGTCAG GTAATTTTAA AACTTACGA GAGTTTGTGT
    21990      22000      22010      22020      22030      22040      22050

    >< Sau3AI
    >< NdeII
    >< MboI
    >< DpnII
    >< DpnI
    >< BspAI
    >< Tru9I
    >< MseI
    >< DraI
    >< SfcI Bsp143I ><
    TTAAAAATAA AGATGGGTTT CTCTATGTTT ATAAGGGCTA TCAACCTATA GATGTAGTTC GTGATCTACC
    22060      22070      22080      22090      22100      22110      22120

    >< Tru9I
    >< MseI
    >< MseI
    >< MnlI
    TTCTGGTTTT AACACTTTGA AACCTATTTT TAAGTTGCCT CTGGGTATTA ACATTACAAA TTTTAGAGCC
    22130      22140      22150      22160      22170      22180      22190

```

FIGURE 13.51

65/116

```

> < SduI>< SfcI
    >< PvuII
    >< Psp5I
> < NspII
    >< NspBII
> < MaeII > < Fnu4HI
> < Bsp1286I >< PstI      Tru9I >
    >< BmyI>< Fnu4HI      MseI >
    >< BspMI
    >< BbvI
    >< AluI
    >< BbvI
>< HphI
ATTCTTACAG CCTTTTCACC TGCTCAAGAC ATTTGGGGCA CGTCAGCTGC AGCCTATTTT GTTGGCTATT
22200      22210      22220      22230      22240      22250      22260

    >< SfaNI
    >< RsaI
    > < Csp6I
    >< AfaI
    >< AlwNI
>< DraI
TAAAGCCAAC TACATTTATG CTCAAGTATG ATGAAAATGG TACAATCACA GATGCTGTTG ATTGTTCTCA
22270      22280      22290      22300      22310      22320      22330

    > < Tru9I
    > < MseI
    >< AluI
AAATCCACTT GCTGAACCTCA AATGCTCTGT TAAGAGCTTT GAGATTGACA AAGGAATTTA CCAGACCTCT
22340      22350      22360      22370      22380      22390      22400

    >< SauI
    >< MstII
    >< Eco81I
    >< DdeI
    >< CvnI
    >< Bsu36I
    >< Bse21I
    >< AxyI
    >< TfiI
>< MnlI
AATTTTCAGGG TTGTTCCCTC AGGAGATGTT GTGAGATTCC CTAATATTAC AAAGTTGTGT CCTTTTGGAG
22410      22420      22430      22440      22450      22460      22470

    >< Zsp2I
    >< Ppu10I
    >< NsiI
    > < NlaIII
    >< Mph1103I
    >< EcoT22I
    >< AvaIII
>< Tru9I
>< MseI
AGGTTTTTAA TGCTACTAAA TTCCCTTCTG TCTATGCATG GGAGAGAAAA AAAATTCTTA ATTGTGTTGC
22480      22490      22500      22510      22520      22530      22540

    >< SduI
    >< NspII
    >< HgiAI
    >< Bsp1286I
    >< BmyI
    >< Alw21I
    >< Tru9I
    >< MseI
    DdeI ><
TGATTACTCT GTGCTCTACA ACTCAACATT TTTTCAACC TTTAAGTGCT ATGGCGTTTC TGCCACTAAG
22550      22560      22570      22580      22590      22600      22610

>< Sau3AI
>< NdeII
>< MboI
>< DpnII
>< DpnI

```

FIGURE 1352

```

>< BspAI
>< Bsp143I
TTGAATGATC TTTGCTTCTC CAATGTCTAT GCAGATTCTT TTGTAGTCAA GGGAGATGAT GTAAGACAAA
22620      22630      22640      22650      22660      22670      22680

>< ScrFI
>< MvaI
>< HinPII
>< Hin6I
>< HhaI
>< HaeII
>< EcoRII
>< Ecl136I
>< DsaV
>< CfoI
>< BstOI
>< BstNI
>< Bsp143II
>< BsiLI
>< ApyI      > < BsrI
TAGCGCCAGG ACAAACTGGT GTTATTGCTG ATTATAATTA TAAATTGCCA GATGATTTCA TGGGTTGTGT
22690      22700      22710      22720      22730      22740      22750

>< SfaNI
>< RmaI
>< MaeI
>< BsrI
CCTTGCTTGG AATACTAGGA ACATTGATGC TACTTCAACT GGTAATTATA ATTATAAATA TAGGTATCTT
22760      22770      22780      22790      22800      22810      22820

>< Sau96I
>< Pali
>< NspIV
> < HindIII
>< HaeIII
>< EcoO109I
>< DraII
>< DdeI
>< Cfr13I
>< BsuRI
>< BsiZI
>< BshI
>< BfrI >< PssI
>< NlaIII >< AsuI>< BsmAI
>< AluI      >< Alw26I
AGACATGGCA AGCTTAGGCC CTTTGAGAGA GACATATCTA ATGTGCCTTT CTCCCCTGAT GGCAAACCTT
22830      22840      22850      22860      22870      22880      22890

>< Tru9I
>< Pali
>< MscI
>< HaeIII
>< EaeI>< MseI
>< Tru9I      >< BsuRI
>< MseI      >< BshI
>< BspMI      >< BalI
GCACCCACCC TGCTCTTAAT TGTTATTGGC CATTAAATGA TTATGGTTTT TACACCACTA CTGGCATTGG
22900      22910      22920      22930      22940      22950      22960

>< Sau96I ><
>< PalINspIV ><
> < MspI NspHII ><
>< HaeIII

```

FIGURE 13.53

```

> < HpaII Eco47I >
  >< DsaI
  > < HapII Cfr13I >
    >< BsuRISinI >
    >< GdiII Bsi2I >
      >< BsaJI
      >< Tru9I >< EaeI Bme18I >
      >< MseI >< Cfr10I AvaII >
      >< DraI >< BshI AsuI >
CTACCAACCT TACAGAGTTG TAGTACTTTC TTTTGAACCT TTAAATGCAC CGGCCACGGT TTGTGGACCA
  22970      22980      22990      23000      23010      23020      23030

      >< Tru9I      >< RsaI
      >< Tru9I      >< Csp6I
      >< PleI      >< BsrI ><
      >< MseI      >< BsrI
      > < Tru9I
      > < MseI>< BsrI >< MseI >< HinfI >< AfaI
AAATTATCCA CTGACCTTAT TAAGAACCAG TGTGTCAATT TTAATTTTAA TGGACTCACT GGTACTGGTG
  23040      23050      23060      23070      23080      23090      23100

>< Tru9I      >< Pali
>< MseI      >< HaeIII
>< MboII      >< GdiII
>< HpaI      >< EaeI
>< HindII      >< BsuRI      TfiI ><
>< HincII      >< BshI      HinfI ><
TGTTAACTCC TTCTTCAAAG AGATTTC AAC CATTTCACA ATTTGGCCGT GATGTTTCTG ATTCACTGA
  23110      23120      23130      23140      23150      23160      23170

  > < XhoII
  >< TthHB8I
  >< TaqI
    > < Sau3AI
    > < NdeII
    > < MflI
    > < MboI
    > < DpnII
    >< DpnI
    > < BstYI
    > < BspAI
  >< AlwI >< Bsp143I      > < SspI
  >< HphI
TTCCGTTTGA GATCCTAAAA CATCTGAAAT ATTAGACATT TCACCTTGCT CTTTGGGGG TGTAAGTGTA
  23180      23190      23200      23210      23220      23230      23240

  >< ScrFI
  >< MvaI
  >< EcoRII
  >< Ecl136I
  >< DsaV      >< Tru9I
  >< BstOI      >< MseI
  >< BstNI      >< HpaI
  >< BsiLI      >< HindII
  >< ApyI      >< Eco57I
  >< BsqI      >< HincII
ATTACACCTG GAACAAATGC TTCATCTGAA GTTGCTGTTC TATATCAAGA TGTTAACTGC ACTGATGTTT
  23250      23260      23270      23280      23290      23300      23310

      >< Sau3AI
      >< NlaIII
      >< NdeII
      >< MboI
      >< DpnII
      >< DpnI
      >< HinfII

```

FIGURE 13. 54

```

      >< BspWI                      >< Hin6I
      >< BspAI                      > < HhaI                      PleI ><
    >< SfcI      >< Bsp143I      >< AluI> < CfoI                      >< BsrI
CTACAGCAAT TCATGCAGAT CAACTCACAC CAGCTTGGCG CATATATTCT ACTGGAAACA ATGTATTCCA
    23320      23330      23340      23350      23360      23370      23380

      >< TthHB8I
      >< TaqI
      >< SalI
      >< RtrI
      >< NspI
      >< EspI >< NspHI
      >< DdeI >< NlaIII
      >< CelII >< HindII
      >< Bpu1102I>< HincII
    >< HinfI      >< AluI      >< AccI
GACTCAAGCA GGCTGTCTTA TAGGAGCTGA GCATGTCGAC ACTTCTTATG AGTGGCAGAT TCCTATTGGA
    23390      23400      23410      23420      23430      23440      23450

      > < SnaBI
      >< ScaI
      >< RsaI
      >< RmaI
    >< MaeII >< MaeI
      > < Eco105I
      >< Csp6I
    > < BsaAI
    >< AfaI
    >< AluI      >< MaeI
GCTGGCATTG GTGCTAGTTA CCATACAGTT TCTTTATTAC GTAGTACTAG CCAAAAATCT ATTGTGGCTT
    23460      23470      23480      23490      23500      23510      23520

      >< MunI
ATACTATGTC TTTAGGTGCT GATAGTTCAA TTGCTTACTC TAATAACACC ATTGCTATAC CTACTAACTT
    23530      23540      23550      23560      23570      23580      23590

      >< RsaI ><
      >< MnlI
      >< Csp6I ><
      >< AfaI ><
    >< SfcI
TTCAATTAGC ATTACTACAG AAGTAATGCC TGTTCCTATG GCTAAACCT CCGTAGATTG TAATATGTAC
    23600      23610      23620      23630      23640      23650      23660

      > < TfiI
      > < HinfI
    >< AciI
ATCTGCGGAG ATTCTACTGA ATGTGCTAAT TTGCTTCTCC AATATGGTAG CTTTTCACAC CAACTAAATC
    23670      23680      23690      23700      23710      23720      23730

    >< VneI
    >< SduI
    >< NspII
    >< HgiAI
    >< SnoI>< DdeI      >< PmlI
    >< Bsp1286I      >< Sau3AI      >< PmaCI
    >< BmyI      >< NdeII      >< MaeII
    >< BbvI      >< MboI      >< Eco72I
    >< ApaLI      >< DpnI      >< BsaAI
    >< Alw44I      >< Bsp143I >< BbrPI
    >< Alw21I      >< DpnII >< AlwI
    >< Fnu4HI >< BspAI >< AflIII
GTGCACTCTC AGGTATTGCT GCTGAACAGG ATCGCAACAC ACGTGAAGTG TTCGCTCAAG TCAAACAAAT
    23740      23750      23760      23770      23780      23790      23800

```

FIGURE 13.55


```

>< RsaI
>< Csp6I
>< AfaI
GTACAAAACC CCAACTTTGA AATATTTTGG TGGTTTAAAT TTTTCACAAA TATTACCTGA CCTCTAAAG
23810      23820      23830      23840      23850      23860      23870

>< MnlI
>< MnlI
>< DdeI >< MnlI
CCAATAAGA GGTCTTTTAT TGAGGACTTG CTCTTTAATA AGGTGACACT CGCTGATGCT GGCTTCATGA
23880      23890      23900      23910      23920      23930      23940

>< XhoII
>< Sau3AI
>< StyI
>< RmaI
>< MaeI
>< EcoT14I
>< Eco130I
>< BssT1I
>< BsmI
>< BscCI
>< BsaJI
>< BlnI
>< AvrII
>< RmaI
>< NdeII
>< MflI
>< MboI
>< MaeI
>< VspI
>< HphI> < DpnI
>< Tru9I
>< MseI
>< AsnI
>< AseI
>< RmaI
>< MstI
>< HinP1I
>< Hin6I
>< HhaI
>< FspI
>< FdiII
>< CfoI
>< AviII
AGCAATATGG CGAATGCCTA GGTGATATTA ATGCTAGAGA TCTCATTGT GCGCAGAAGT TCAATGGACT
23950      23960      23970      23980      23990      24000      24010

>< MnlI
>< BspWI
TACAGTGTG CCACCTCTGC TCACTGATGA TATGATTGCT GCCTACACTG CTGCTCTAGT TAGTGGTACT
24020      24030      24040      24050      24060      24070      24080

>< MboII
>< HinP1I
>< Hin6I
>< HhaI
>< HaeII
>< Fnu4HI
>< CfoI
>< FokI
>< BbvI
>< BspWI
>< Bsp143II
>< Fnu4HI
>< Ksp632I
>< EarI
>< Eam1104I
GCCACTGCTG GATGGACATT TGGTGCTGGC GCTGCTCTTC AAATACCTTT TGCTATGCAA ATGGCATATA
24090      24100      24110      24120      24130      24140      24150

>< MaeIII
>< Tru9I
>< MseI
GGTTCAATGG CATTGGAGTT ACCCAAATG TTCTCTATGA GAACCAAAAA CAAATCGCCA ACCAATTTAA
24160      24170      24180      24190      24200      24210      24220

>< TfiI
>< HinfI
>< BbvI
>< AluI
CAAGGCGATT AGTCAAATTC AAGAATCACT TACAACAACA TCAACTGCAT TGGGCAAGCT GCAAGACGTT
24230      24240      24250      24260      24270      24280      24290

>< Tru9I
>< MseI
>< HpaI
>< HindII
>< HincII>
>< BsmI
>< Tru9I
>< MseI
>< DdeI
>< BfrI
>< AluI

```

FIGURE 13. 56

```

GTTAACCAGA ATGCTCAAGC ATTAAACACA CTTGTAAAC AACTTAGCTC TAATTTGGT GCAATTTCAA
24300      24310      24320      24330      24340      24350      24360

>< Thai
>< SpoI
>< NruI
>< MvnI
>< BstUI      >< TthHB8I
>< Bsp68I      >< TaqI      >< RsaI
>< EcoRV      >< Bsp50I      >< MnlI      >< Csp6I      >< Tru9I
>< Eco32I >< AccII >< MnlI      >< AciI>< AfaI      >< MseI
GTGTGCTAAA TGATATCCTT TCGCGACTTG ATAAAGTCGA GCGGAGGTA CAAATTGACA GGTTAATTAC
24370      24380      24390      24400      24410      24420      24430

>< MaeIII >< BbvI      >< Fnu4HI      BbvI ><
AGGCAGACTT CAAAGCCTTC AAACCTATGT AACACAACAA CTAATCAGGG CTGCTGAAAT CAGGGCTTCT
24440      24450      24460      24470      24480      24490      24500

>< Fnu4HI
>< BspWI      >< DdeI      >< HindII
GCTAATCTTG CTGCTACTAA AATGTCTGAG TGTGTTCTTG GACAATCAAA AAGAGTTGAC TTTGTGGAA
24510      24520      24530      24540      24550      24560      24570

>< NspI
>< NspHI
>< NlaIII
>< MaeIII
>< NlaIII
>< MboII
>< FokI
>< Fnu4HI >< BbsI      BsaAI ><
>< AciI>< BbvI      >< AflIII
AGGGCTACCA CCTTATGTCC TTCCACAAG CAGCCCGCA TGGTGTGTC TTCCTACATG TCACGTATGT
24580      24590      24600      24610      24620      24630      24640

>< ScrFI
>< MvaI
>< EcoRII
>< Ecl136I
>< BstOI
>< BstNI
>< MnlI >< BslI      >< HinfII
>< DsaV>< BsiYI      >< HinfI
>< BsiLI      >< HhaI
>< BsaJI>< HphI      >< HaeII
>< ApyI      >< CfoI      >< NlaIII
>< Bsp143II >< BspHI      EcoNI ><
GCCATCCCAG GAGAGGAACT TCACCACAGC GCCAGCAATT TGTCATGAAG GCAAAGCATA CTTCCCTCGT
24650      24660      24670      24680      24690      24700      24710

>< MnlI
>< BslI      >< Tru9I
>< BsiYI      >< MseI
>< MnlI
GAAGGTGTTT TTGTGTTTAA TGGCACTTCT TGGTTTATTA CACAGAGGAA CTTCTTTTCT CCACAAATAA
24720      24730      24740      24750      24760      24770      24780

>< DdeI      >< Tru9I
>< BsmAI      >< SfaNI
>< SfcI      >< Alw26I      >< MseIAlwI ><
TTACTACAGA CAATACATTT GTCTCAGGAA ATGTGTATGT CGTTATTGGC ATCATTAAAC ACACAGTTTA
24790      24800      24810      24820      24830      24840      24850

>< Sau3AI
>< NdeII

```

FIGURE 13.57

71/116

```

>< MboI          >< P1eI          > < ScaI
>< DpnII         >< MnlI          > < Ksp632I      > < RsaI
  >< DpnI         >< DdeI >< HinfI      >< MboII
>< BspAI         >< BspWI       > < Eam1104I      >< Csp6I
  >< Bsp143I      >< AluI        > < EarI > < AluI > < AfaI > < HphI
TGATCCTCTG CAACCTGAGC TTGACTCATT CAAAGAAGAG CTGGACAAGT ACTTCAAAAA TCATACATCA
24860      24870      24880      24890      24900      24910      24920

  >< Sau3AI
  >< NdeII
  >< MboI
>< MamI
  >< DpnII
  >< DpnI
  >< BspAI
  >< Bsp143I
  >< BsiBI          >< Tru9I          >< HindII
  >< BsaBI          >< MseI          >< HincII      AciI ><
CCAGATGTTG ATCTTGGCGA CATTTCAGGC ATTAACGCTT CTGTCGTCAA CATTCAAAAA GAAATTGACC
24930      24940      24950      24960      24970      24980      24990

  >< Tru9I
  > < TfiI
  >< MnlI          >< SwaI
  >< EcoNI         >< MseI
  >< BslI          > < HinfI
>< MnlI>< BsiYI    >< DraI
GCCTCAATGA GGTGCTTAAA AATTAAATG AATCACTCAT TGACCTTCAA GAATTGGGAA AATATGAGCA
25000      25010      25020      25030      25040      25050      25060

  >< StyI
  >< P1eI
  >< HaeIII
  >< EcoT14I
  >< Eco130I
  >< BsuRI
  >< BstT1I
  >< Tru9I>< BshI          NlaIII ><
  >< MseI >< BsaJI          MaeIII ><
ATATATTAAA TGGCCTTGGT ATGTTTGGCT CGGCTTCATT GCTGGACTAA TTGCCATCGT CATGGTTACA
25070      25080      25090      25100      25110      25120      25130

  > < SphI
  > < PaeI
  >< SpeI          > < NspI
  > < RmaI        > < NspHI
  >< NlaIII       > < NlaIII
  > < MaeI        >< MnlI>< BbvI Fnu4HI ><
ATCTTGCTTT GTTGCATGAC TAGTTGTTGC AGTTGCCTCA AGGGTGCATG CTCTTGTGGT TCTTGCTGCA
25140      25150      25160      25170      25180      25190      25200

  >< FokI
  >< DdeI
>< MnlI >< P1eI>< HinfI >< BsrI
AGTTTGATGA GGATGACTCT GAGCCAGTTC TCAAGGGTGT CAAATTACAT TACACATAAA CGAACTTATG
25210      25220      25230      25240      25250      25260      25270

  >< Sau3AI
  >< NdeII
  >< MboI
  >< DpnII
  > < DpnI

```

FIGURE 13.58

72/116

```

>< BspAI
  > < Bsp143I
    >< BsgI      >< AlwI      >< BsrI      BspWI >
GATTGTGTTA TGAGATTTT TACTCTTGA TCAATTACTG CACAGCCAGT AAAAATTGAC AATGCTTCTC
25280      25290      25300      25310      25320      25330      25340

  >< ScaI
  >< RsaI
  >< Csp6I      >< SfcI
    >< AfaI      >< NlaIII      >< AciI      >< MnlI      FokI >
CTGCAAGTAC TGTTCATGCT ACAGCAACGA TACCGCTACA AGCCTCACTC CCTTTCGGAT GGCTTGTTAT
25350      25360      25370      25380      25390      25400      25410

    > < HinPII
    > < Hin6I
      >< HhaI
        >< HaeII      >< HinPII      RmaI ><
        >< Eco47III      >< Hin6I      NheI ><
        >< CfoI      >< HhaI      MaeI ><
          >< BspWI      >< Bsp143II      Fnu4HI ><
TGGCGTTGCA TTTCTTGCTG TTTTTCAGAG CGCTACCAAA ATAATTGCGC TCAATAAAAG ATGGCAGCTA
25420      25430      25440      25450      25460      25470      25480

  >< EcoNI
  >< BslI
  >< BsiYI
    >< BbvI      >< BsrI      >< BbvI      > < Fnu4HI      BbvI ><
GCCCTTTATA AGGGCTTCCA GTTCATTGTC AATTTACTGC TGCTATTTGT TACCATCTAT TCACATCTTT
25490      25500      25510      25520      25530      25540      25550

    >< MaeIII
      Zsp2I ><
      Ppu10I ><
        > < SfcI      >< HinPII
          >< PstI      >< Hin6I      >< RsaI      NsiI ><
        > < Fnu4HI      >< HhaI      >< Csp6I      Mph1103I ><
  >< BspMI      >< MnlI      >< CfoI      >< AfaI      >< MnlI      EcoT22I ><
TGCTTGTCGC TGCAGGTATG GAGGCGCAAT TTTTGTACCT CTATGCCTTG ATATATTTTC TACAATGCAT
25560      25570      25580      25590      25600      25610      25620

    >< SfaNI
    >< NspI
    >< NspHI
    >< NlaIII
      CAACGCATGT AGAATTATTA TGAGATGTTG GCTTTGTTGG AAGTGCAAAT CCAAGAACCC ATTACTTTAT
25630      25640      25650      25660      25670      25680      25690

    >< SfaNI
      >< Bst1107I
        >< AccI      MaeIII ><
GATGCCAACT ACTTTGTTTG CTGGCACACA CATAACTATG ACTACTGTAT ACCATATAAC AGTGTCACAG
25700      25710      25720      25730      25740      25750      25760

    >< MboII
      >< HphI
        BstXI ><
  >< MunI >< MaeIII >< MaeIII >< Eco57I >< BbsI MnlI >
ATACAATTGT CGTTACTGAA GGTGACGGCA TTTCAACACC AAAACTCAAA GAAGACTACC AAATTGGTGG
25770      25780      25790      25800      25810      25820      25830

    >< RsaI
      > < NlaIII
        >< HphI
          >< Tru9I >< Tth111I >< Csp6I
  >< DdeI      >< DdeI >< MseI >< AspI >< AfaI

```

FIGURE 13.59

```

TTATTCTGAG GATAGGCACT CAGGTGTAA AGACTATGTC GTTGTACATG GCTATTTTAC CGAAGTTTAC
25840      25850      25860      25870      25880      25890      25900

      > < HinfI>< PstI
      << AluI >< AccI      << SfcI >< AlwNI      << BsrI      Tru9I ><
      << MseI ><          << MboII      HindIII >
TACCAGCTTG AGTCTACACA AATTACTACA GACACTGGTA TTGAAAATGC TACATTCTTC ATCTTTAACA
25910      25920      25930      25940      25950      25960      25970

      << Tru9I      << TthHB8I
      << MseI      << TaqI      << Ksp632I
      << AluI      << MboII      << EarI BspWI ><
      AGCTTGTAA AGACCCACCG AATGTGCAAA TACACACAAT CGACGGCTCT TCAGGAGTTG CTAATCCAGC
25980      25990      26000      26010      26020      26030      26040

      << XhoII
      << Sau3AI
      << NlaIV
      << NdeII
      << MflI
      << MboI
      << DpnII
      << DpnI
      << BstYI
      << BstI
      << BspAI
      << Bsp143I
      << BscBI
      << BamHI >< AlwI
      AATGGATCCA ATTTATGATG AGCCGACGAC GACTACTAGC GTGCCTTTGT AAGCACAAGA AAGTGAGTAC
26050      26060      26070      26080      26090      26100      26110

      << RmaI
      << MaeI
      << MseI
      << MboII
      << MaeII
      << RsaI
      << Csp6I
      << AfaI
      << Csp6I
      << Tru9I >< Csp6I
      << AfaI
      << MseI
      << AfaI
GAACCTTATGT ACTCATTCGT TTCGGAAGAA ACAGGTACGT TAATAGTTAA TAGCGTACTT CTTTTCTTG
26120      26130      26140      26150      26160      26170      26180

      << TthHB8I
      << TaqI
      << RmaI
      << MaeIII
      << MaeI >< RmaI
      << FokI >< MaeI
      << HinP1I
      << Hin6I
      << HhaI
      << CfoI >< BbvI >< AfaI
      << RsaI
      << Fnu4HI ><
      << Csp6I
      CTTTCGTGGT ATTCTTGCTA GTCACACTAG CCATCCTTAC TGCCTTCGA TTGTGTGCGT ACTGCTGCAA
26190      26200      26210      26220      26230      26240      26250

      << Tru9I
      << ThaI
      << MseI
      << MvnI
      << SspI >< MaeII
      << HpaI
      << HindII
      << HincII
      << MaeII
      << BstUI
      << Bsp50I
      << MboII EarI >
      << AccI >< AccII
      << Eam1104I >
TATTGTTAAC GTGAGTTTAG TAAACCAAC GGTTCACGTC TACTCGCGTG TTAAATCT GAACCTCTCT
26260      26270      26280      26290      26300      26310      26320

```

FIGURE 13.60

FIGURE 13.61

FIGURE 13.61

```

>< BfrI
>< AluI
CTTAGCTACT TCGTTGCTTC CTCAGGCTG TTTGCTCGTA CCCGCTCAAT GTGGTCATTC AACCCAGAAA
26680      26690      26700      26710      26720      26730      26740

>< AfaI
>< AciI
MboII >
>< ScrFI
>< NciI
>< MspI
>< HpaII
>< HapII
>< DsaV>< MnlI
>< BslI
>< BsiYI
>< BsaJI >< MunI
>< BcnI >< MaeIII >< AciI >< NlaIII
>< XcmI
CAAACATTCT TCTCAATGTG CCTCTCCGGG GGACAATTGT GACCAGACCG CTCATGGAAA GTGAACTTGT
26750      26760      26770      26780      26790      26800      26810

Tru9I ><
SinI >
Sau96I >
PpuMI >
NspIV >
MseI ><
>< MaeIII
>< Sau3AI
>< NdeII
>< MboI
>< FbaI
>< DpnII
>< DpnI
>< BspAI
>< Bsp143I
>< BsiQI
>< BclI
>< MaeIII
CATTGGTGCT GTGATCATTC GTGGTCACTT GCGAATGGCC GGACACTCCC TAGGGCGCTG TGACATTAG
26820      26830      26840      26850      26860      26870      26880

>< Sau3AI
>< NdeII
>< MboI
>< DpnII
>< DpnI
>< PssI >< BspMI
>< Psp5II >< BspAI
>< NspHII >< Bsp143I
GACCTGCCAA AAGAGATCAC TGTGGCTACA TCACGAACGC TTTCTTATTA CAAATTAGGA GCGTCGCAGC
26890      26900      26910      26920      26930      26940      26950

>< TfiI
>< HinfI
>< BbvI
>< BbvI
>< Fnu4HI >< AciI
>< Tru9I
>< MseI
GTGTAGGCAC TGATTCAGGT TTTGCTGCAT ACAACCGCTA CCGTATTGGA AACTATAAAT TAAATACAGA
26960      26970      26980      26990      27000      27010      27020

>< MspI
>< HpaII
>< HapII
>< Cfr10I
>< BcgI/a
>< RsaI
>< RmaI
>< Csp6I
>< MaeI>< BcgI
>< AfaI >< MaeIII
HindII ><
HincII ><

```

FIGURE 13.62

```

CCACGCCGGT AGCAACGACA ATATTGCTTT GCTAGTACAG TAAGTGACAA CAGATGTTTC ATCTTGTTGA
27030      27040      27050      27060      27070      27080      27090

>< ScrFI
>< MvaI
  >< MaeIII
>< EcoRII
  >< Ecl136I
>< DsaV
  >< BstOI
  >< BstNI
  >< BsiLI
  >< ApyI
                                >< MnlI
                                HinfI ><
CTCCAGGTT ACAATAGCAG AGATATTGAT TATCATTATG AGGACTTTCA GGATTGCTAT TTGGAATCTT
27100      27110      27120      27130      27140      27150      27160

                                >< BsmAI
                                >< Tru9I
                                > < MnlI
>< MaeII
  >< Alw26I
  >< MseI
  >< DdeI
                                >< MboII
GACGTTATAA TAAGTTCAAT AGTGAGACAA TTATTTAAGC CTCTAACTAA GAAGAATTAT TCGGAGTTAG
27170      27180      27190      27200      27210      27220      27230

                                >< Ksp632I
                                >< MboII
                                >< EarI
                                >< NlaIII Eam1104I ><
ATGATGAAGA ACCTATGGAG TTAGATTATC CATAAAACGA ACATGAAAT TATTCTCTC CTGACATTGA
27240      27250      27260      27270      27280      27290      27300

                                > < RsaI >< RsaI
                                >< Csp6I >< Csp6I
                                > < AfaI >< AfaI
TTGTATTAC ATCTTGCGAG CTATATCACT ATCAGGAGTG TGTTAGAGGT ACGACTGTAC TACTAAAAGA
27310      27320      27330      27340      27350      27360      27370

                                >< MnlI >< HphI >< HphI
                                >< MnlI
ACCTTGCCCA TCAGGAACAT ACGAGGGCAA TTCACCATT CACCCTCTTG CTGACAATAA ATTTGCACTA
27380      27390      27400      27410      27420      27430      27440

                                Sau3AI >
                                > < PvuII
                                > < Psp5I
                                >< NspBII
                                >< TthHB8I
                                >< TaqI
                                NdeII >
                                MboI >
                                >< RsaI
                                >< Fnu4HI
                                >< Csp6I
                                DpnII >
                                >< BbvI
                                BspAI >
                                >< AfaI
                                > < AluI
ACTTGCACTA GCACACACTT TGCTTTTGCT TGTGCTGACG GTACTCGACA TACCTATCAG CTGCGTGCAA
27450      27460      27470      27480      27490      27500      27510

                                >< SstI
                                >< SduI
                                >< SacI
                                >< NspII
                                >< HgiAI
                                >< Eco24I
                                > < Ecl136II
                                >< BspWI
                                >< Bsp1286I
                                >< BmyI
                                >< BanII
                                >< Alw21I

>< HphI
>< DpnI
                                >< MnlI

```

FIGURE 13. 63


```

>< Bsp143I          >< MnlI          > < AluI      BbvI ><
GATCAGTTTC ACCAAACTT TTCATCAGAC AAGAGGAGGT TCAACAAGAG CTCTACTCGC CACTTTTTCT
27520      27530      27540      27550      27560      27570      27580

SstI ><
SduI ><
SacI ><
NspII ><
HgiAI ><
Eco24I ><
Ecl136II ><
Bsp1286I ><
BmyI ><
BanII ><
Alw21I ><
AluI ><
>< Fnu4HI          >< RmaI          >< Tru9I
>< MaeI          >< MseI          >< Tru9I
CATTGTTGCT GCTCTAGTAT TTTTAATACT TTGCTTCACC ATTAAGAGAA AGACAGAATG AATGAGCTCA
27590      27600      27610      27620      27630      27640      27650

>< Tru9I          >< Tru9I
>< MseI          >< MseI
CTTTAATTGA CTTCTATTTG TGCTTTTTAG CCTTCTGCT ATTCCTTGTT TTAATAATGC TTATTATATT
27660      27670      27680      27690      27700      27710      27720

>< XhoII
>< XbaI
> < ScrFI
>< Sau3AI
>< RmaI
>< NdeII
> < MvaI
>< MflI
>< MboI
>< EcoRII>< MaeI
> < Ecl136I
>< DpnII
>< DpnI
>< BstYI
> < BstOI
> < BstNI
>< TthHB8I >< BspAI          > < RsaI
>< DsaV>< Bsp143I          >< MboII
> < BsiLI          >< Csp6I
>< TaqI > < ApyI > < AlwI > < AfaI          >< NlaIII
TTGGTTTTC CTCGAAATCC AGGATCTAGA AGAACCTTGT ACCAAAGTCT AAACGAACAT GAAACTTCTC
27730      27740      27750      27760      27770      27780      27790

>< HinfII
>< HinfI
>< HhaI
>< RsaI >< HaeII
>< SfcI          >< Eco47III
>< Csp6I>< CfoI SfaNI ><
>< AfaI >< Bsp143II
ATTGTTTTGA CTTGTATTTT TCTATGCAGT TGCATATGCA CTGTAGTACA GCGCTGTGCA TCTAATAAAC
27800      27810      27820      27830      27840      27850      27860

>< XhoII
>< Sau3AI
>< NdeII
> < MnlI
>< MflI

```

FIGURE 13.64

```

>< MboI
>< DpnII
>< DpnI >< RsaI
>< BstYI >< MboII
>< NlaIII>< BspAI >< Csp6I >< RmaI
>< AlwI >< Bsp143I >< AfaI >< MaeI
CTCATGTGCT TGAAGATCCT TGTAAGGTAC AACACTAGGG GTAATACTTA TAGCACTGCT TGGCTTTGTG
27870 27880 27890 27900 27910 27920 27930

>< SduI
>< RmaI
>< NspII
>< MaeI
>< HgiAI
>< Bsp1286I
>< BmyI
>< Alw21I
CTCTAGGAAA GGTTTTACCT TTTCATAGAT GGCACACTAT GGTTCAAACA TGCACACCTA ATGTTACTAT
27940 27950 27960 27970 27980 27990 28000

> < XhoII
> < Sau3AI > < Van91I
>< PvuII
>< Psp5I
> < NdeII > < PflMI
> < MflI>< NspBII
> < DpnII >< HinP1I
>< Bsp143I >< Hin6I
> < BstYI > < BslI >< HhaI >< RmaI
> < BspAI > < BsiYI>< CfoI >< MaeI
> < MboI>< AluI>< BspWI >< BspWI
>< AlwI >< DpnI > < AccB7I >< AluI
CAACTGTCAA GATCCAGCTG GTGGTGCGCT TATAGCTAGG TGTTGGTACC TTCATGAAGG TCACCAAACCT
28010 28020 28030 28040 28050 28060 28070

>< SinI
>< Sau96I
>< NspIV
NspHII ><
NlaIV ><
>< Eco47I
>< Cfr13I
>< BsiZI
BscBI ><
>< Bme18I
>< AvaII
>< AsuI

>< Fnu4HI >< RsaI
>< Esp3I >< MaeII
>< BsmAI >< Csp6I >< Tru9I
>< BsmBI >< BsmBI >< MseI
>< Alw26I >< AfaI >< DraI
GCTGCATTTA GAGACGTACT TGTTGTTTTA AATAAACGAA CAAATTAAAA TGTCTGATAA TGGACCCCAA
28080 28090 28100 28110 28120 28130 28140

>< SinI
>< Sau96I
>< NspIV
>< NspHII
>< NlaIV
>< Eco47I
>< Cfr13I
>< BsiZI
>< BscBI
>< Bme18I
>< AvaII
>< AsuI

>< SduI
>< NspII
>< Bsp1286I
>< BmyI
>< MaeII >< AciI
>< SinI
>< Sau96I
>< NspIV
>< NspHII
>< NlaIV
>< Eco47I
>< Cfr13I
>< BsiZI
>< BscBI
>< Bme18I
>< AvaII >< TfiI
>< AsuI >< HinfI
>< MnlI

```

FIGURE 13. 65

```

TCAAACCAAC GTAGTGCCCC CCGCATTACA TTTGGTGGAC CCACAGATTC AACTGACAAT AACCAGAATG
28150      28160      28170      28180      28190      28200      28210

      >< HinPII >< StyI
      >< HaeII
      > < Pali >< Hin6I >< EcoT14I
      > < HaeIII >< HhaI>< Eco130I
      >< BspWI >< BssT1I
      > < BsuRI >< Bsp143II
      >< HgaI> < BshI >< CfoI>< BsaJI >< HgaI
GAGGACGCAA TGGGGCAAGG CCAAAACAGC GCCGACCCCA AGGTTTACCC AATAATACTG CGTCTTGGTT
28220      28230      28240      28250      28260      28270      28280

      >< TthHB8I
      > < ScrFI
      >< Pali
      >< PaeR7I
      >< NspIII
      > < MvaI
      >< HaeIII
      >< EcoRII
      >< Eco88I
      >< XhoI > < Ecl136I
      >< DsaV
      >< BsuRI
      >< SlaI > < BstOI
      >< MnlI>< TaqI> < BstNI
      >< CcrI > < BsiLI
      >< HinfI >< BshI
      >< TfiI>< BcoI>< BsaJI
      >< MnlI >< DdeI >< AvaI > < ApyI
      >< AluI >< DdeI > < NlaIII >< BfrI >< Ama87I >< MnlI
CACAGCTCTC ACTCAGCATG GCAAGGAGGA ACTTAGATTC CCTCGAGGCC AGGGCGTTCC AATCAACACC
28290      28300      28310      28320      28330      28340      28350

      >< SinI
      >< Sau96I
      >< NspIV
      >< NspHII
      >< Eco47I
      >< Cfr13I
      >< BsiZI
      >< Bme18I >< Ksp632I
      >< AvaII >< Eam1104I
      >< AsuI >< EarI > < AluI>< MboII >< MaeIII
AATAGTGGTC CAGATGACCA AATTGGCTAC TACCGAAGAG CTACCCGACG AGTTCGTGGT GGTGACGGCA
28360      28370      28380      28390      28400      28410      28420

      >< SstI
      >< SduI
      >< SacI
      >< NspII
      >< HgiAI
      >< EspI
      >< Eco24I
      >< Ecl136II
      >< DdeI
      >< CelII
      >< Bsp1286I
      >< Bpu1102I
      >< BmyI
      >< BanII
      >< StyI
      >< RmaI
      >< MaeI
      >< EcoT14I
      >< Eco130I
      >< BssT1I
      >< BsaJI
      >< BsiZI
      >< Sau96I
      >< Pali
      >< NspIV
      >< HaeIII
      >< Cfr13I
      >< BsuRI
      >< BsrI

```

FIGURE 13.66

```

>> Alw21I >> Csp6I >> BlnI >> BshI>< HindIII
>< HphI >< AluI >< AfaI >< AvrII >< AsuI >< AluI
AAATGAAAGA GCTCAGCCCC AGATGGTACT TCTATTACCT AGGAAGCTGGC CCAGAAGCTT CACTTCCCTA
28430 28440 28450 28460 28470 28480 28490

>< HinPII
>< Hin6I
>< HhaI
>< HaeII
>< CfoI >< MnlI >< NlaIV
>< Bsp143II >< SfaNI >< DdeI >< BscBI
CGGCGCTAAC AAAGAAGGCA TCGTATGGGT TGCAACTGAG GGAGCCTTGA ATACACCCAA AGACCACATT
28500 28510 28520 28530 28540 28550 28560

>< NlaIV
>< Eco64I
>< BscBI
>< Bani
>< AciI
>< AccBII >< BbvI >< Fnu4HI >< MnlI
GGCACCCGCA ATCCTAATAA CAATGCTGCC ACCGTGCTAC AACTTCCTCA AGGAACAACA TTGCCAAAAG
28570 28580 28590 28600 28610 28620 28630

>< Thai
>< MnlI
>< MaeII >< MvnI
>< Fnu4HI >< MnlI >< Ksp632I >< BstUI ><
>< BspWI >< EarI >< Bsp50I ><
>< AciI>< MboII >< Eam1104I >< BsaAI>< AciI
GCTTCTACGC AGAGGGAAGC AGAGGCGGCA GTCAAGCCTC TTCTCGCTCC TCATCAGCTA GTCGCGGTAA
28640 28650 28660 28670 28680 28690 28700

>< ScrFI
>< MvaI
>< EcoRII
>< Ecl136I
>< DsaV>< Fnu4HI
>< BstOI
>< BstNI
>< BsiLI
>< ApyI >< BbvI >< TaqI >< AciI
TTCAGAAAT TCAACTCCTG GCAGCAGTAG GGGAAATTCT CCTGCTCGAA TGGCTAGCGG AGGTGGTGAA
28710 28720 28730 28740 28750 28760 28770

>< Thai
>< MvnI
>< HphI >< MnlI
>< HinPII
>< Hin6I
>< HhaI
>< BstUI >< RmaI
>< Bsp50I >< MaeI
>< BbvI>< CfoI>< Fnu4HI
>< AccII>< BspWI >< AluI
ACTGCCCTCG CGCTATTGCT GCTAGACAGA TTGAACCAGC TTGAGAGCAA AGTTTCTGGT AAAGGCCAAC
28780 28790 28800 28810 28820 28830 28840

>< Pali>< MaeIII
>< HaeIII
>< BsuRI >< DdeI
>< Fnu4HI
>< DdeI
>< RsaI ><
>< MnlI
>< MaeII ><
>< BshI ><
>< Csp6I ><

```

FIGURE 13.67

84/116

```

> < BshI > < BbvI > < MnlI > < BspWI > < SfaNI > AfaI >
AACAAACAAGG CCAAACCTGTC ACTAAGAAAT CTGCTGCTGA GGCATCTAAA AAGCCTCGCC AAAAACGTAC
28850      28860      28870      28880      28890      28900      28910

>< Tth111I
>< SinI
>< Sau96I
>< NspIV
>< NspHII
> < MaeII
>< Eco47I
>< Cfr13I
>< BsmBI
>< Bsi2I >< StyI
>< Bme18I >< EcoT14I
>< AvaII >< Eco130I
>< AsuI >< BssTII
>< Alw26I> < AspI >< BsaJI
TGCCACAAAA CAGTACAACG TCACTCAAGC ATTTGGGAGA CGTGGTCCAG AACAAACCCA AGGAAATTTC
28920      28930      28940      28950      28960      28970      28980

>< SinI
>< Sau96I
>< NspIV
>< NspHII
>< NlaIV
>< Eco47I
>< Cfr13I
>< Bsi2I
>< BscBI
>< Bme18I
>< AvaII
>< AsuI
>< Pali
>< HaeIII
>< GdiII
>< Fnu4HI
>< EaeI
>< BsuRI
>< BshI
>< AciI
>< BspWI >
>< BspWI
GGGGACCAAG ACCTAATCAG ACAAGGAAGT GATTACAAAC ATTGGCCGCA AATTGCACAA TTTGCTCCAA
28990      29000      29010      29020      29030      29040      29050

>< BsmI
>< BscCI >< MnlI >< MaeIII >< NlaIII
>< MaeIII >< NlaIII
GTGCCTCTGC ATTCTTTTGA ATGTCACGCA TTGGCATGGA AGTCACACCT TCGGGAACAT GGCTGACTTA
29060      29070      29080      29090      29100      29110      29120

>< XhoII
>< Sau3AI
>< NdeII
>< MflI
>< MboI
>< FokI
>< Tru9I
>< DpnII
>< NlaIV >< DpnI
>< NlaIII >< BstYI
>< MseI >< BspAI
>< BscBI >< BstXI>< AlwI> < Bsp143I >< AspI >< BspWI ><
TCATGGAGCC ATTAAATTGG ATGACAAAGA TCCACAATTC AAAGACAACG TCATACTGCT GAACAAGCAC
29130      29140      29150      29160      29170      29180      29190

>< HgaI
>< EspI ><
>< DdeI ><
>< CelII ><
>< Bpu1102I ><
>< AluI ><
ATTGACGCAT ACAAACATT CCCACCAACA GAGCCTAAAA AGGACAAAAA GAAAAAGACT GATGAAGCTC
29200      29210      29220      29230      29240      29250      29260

```

FIGURE 13.68

```

      >> PfuI
      >> Fnu4HI
      >> BspWI
      >> BsmAI
      >> Alw26I
      >> AciI
      >> MboII
      >> Ksp632I >> GsuI
      >> MaeIII >> EarI >> Fnu4HI
      >> HinfI >> Eam1104I >> BpmI
      >> Fnu4HI >> BbvI >> AciI >> NlaIII
AGCCTTTGCC GCAGAGACAA AAGAAGCAGC CCACTGTGAC TCTTCTTCCT GCGGCTGACA TGGATGATT
29270      29280      29290      29300      29310      29320      29330

      >> NlaIII >> HinfI NlaIII >>
      >> FokI >> AluI >> TfiI >> DdeI >> BspHI
CTCCAGACAA CTTCAAAATT CCATGAGTGG AGCTTCTGCT GATTCAACTC AGGCATAAAC ACTCATGATG
29340      29350      29360      29370      29380      29390      29400

      >> MaeII >> AccI
ACCACACAAG GCAGATGGGC TATGTAAACG TTTTCGCAAT TCCGTTTACG ATACATAGTC TACTCTTGTG
29410      29420      29430      29440      29450      29460      29470

      >> Tru9I
      >> Tru9I
      >> MseI
      >> MseI
      >> HpaI
      >> HindII
      >> HincII
      >> XmnI
      >> EcoRI >> MaeIII
      >> Asp700I >> BsgI
      >> Tru9I >>
      >> MseI >>
CAGAATGAAT TCTCGTAACT AAACAGCACA AGTAGGTTTA GTTAACTTTA ATCTCACATA GCAATCTTTA
29480      29490      29500      29510      29520      29530      29540

      XorII >
      TthHB8I >
      TaqI >
      Sau3AI >>
      RsaI >>
      >> ThaIPvuI >
      NdeII >>
      >> MnlI
      >> MvnIMcrI >
      MboI >>
      DpnII >>
      DpnI >>
      Csp6I >>
      >> BstUI
      >> HaeIII BspCI >
      BspAI >>
      >> TthHB8I >> Bsp50I
      >> Pali Bsp143I >>
      >> BsuRI BsiEI >
      >> BshIAfaI >>
      >> MnlI
      >> MaeIII
      >> MnlI
      >> TaqI >> AciI
      >> AccII
ATCAATGTGT AACATTAGGG AGGACTTGAA AGAGCCACCA CATTTTCATC GAGGCCACGC GGAGTACGAT
29550      29560      29570      29580      29590      29600      29610

      >> SduI
      >> NspII
      >> MboII >> VspI
      >> Ksp632I >> Eco24I >> Tru9I
      >> RsaI >> RmaI >> Fnu4HI >> Bsp1286I >> MseI
      >> Csp6I >> MaeI >> EarI >> BmyI >> AsnI
      >> AfaI >> BbvI >> AluI >> Eam1104I >> BanII >> AseI

```

FIGURE 13.69

83/116.

```
CGAGGGTACA GTGAATAATG CTAGGGAGAG CTGCCTATAT GGAAGAGCCC TAATGTGTAA AATTAATTTT
29620      29630      29640      29650      29660      29670      29680

                >< Tru9I   >< DdeI
                >< MseI   >< BfrI
                >< NlaIII  > < AluI
AGTAGTGCTA TCCCATGTG ATTTAATAG CTTCTTAGGA GAATGACAAA AAAAAAAAAA AAAAAA
29690      29700      29710      29720      29730      29740
```

FIGURE 13. 70

SRAS serology: Indirect N Technique (First set)

84/116

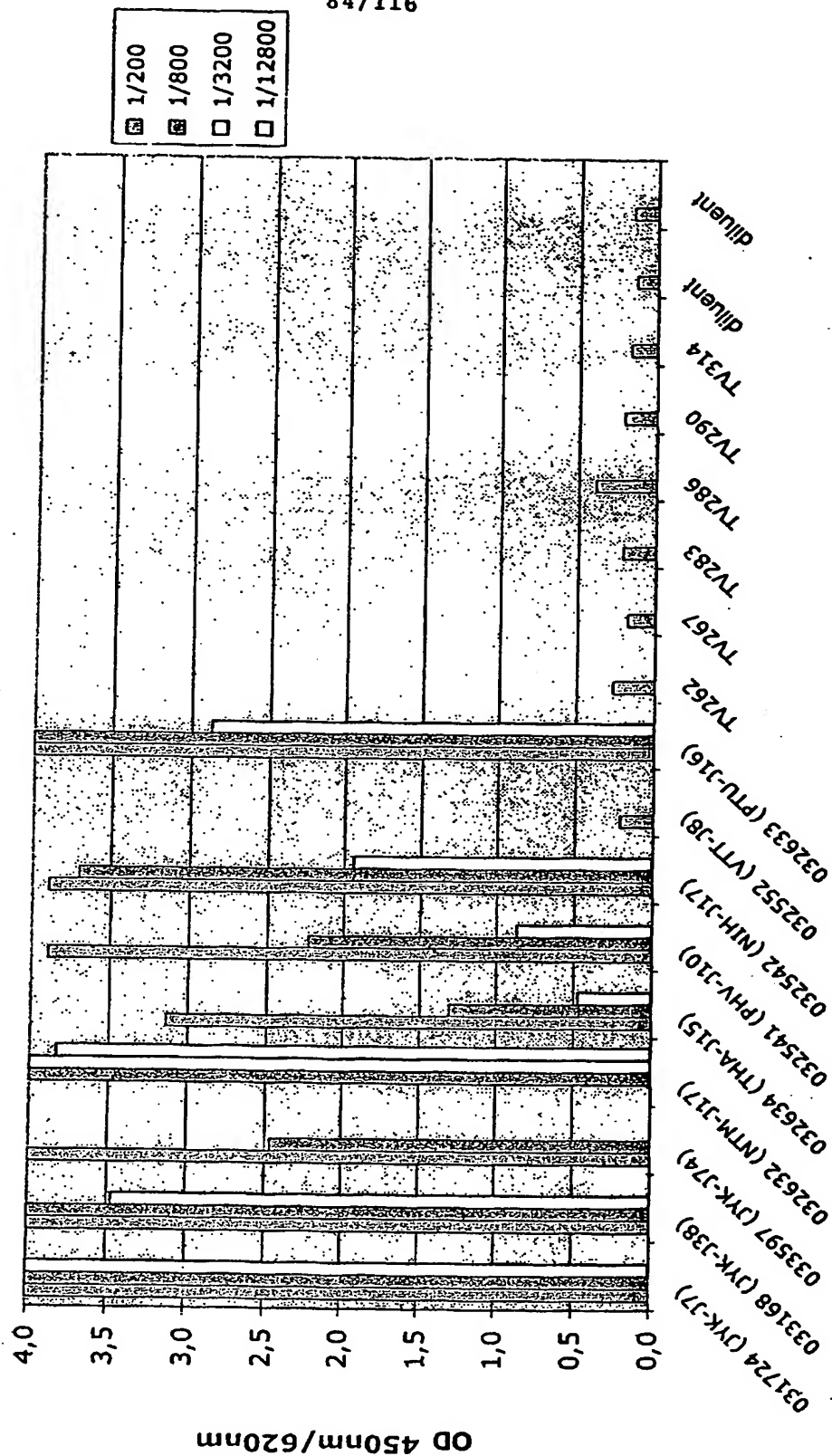


FIGURE 14

SRAS serology: Indirect N Technique (Second set)

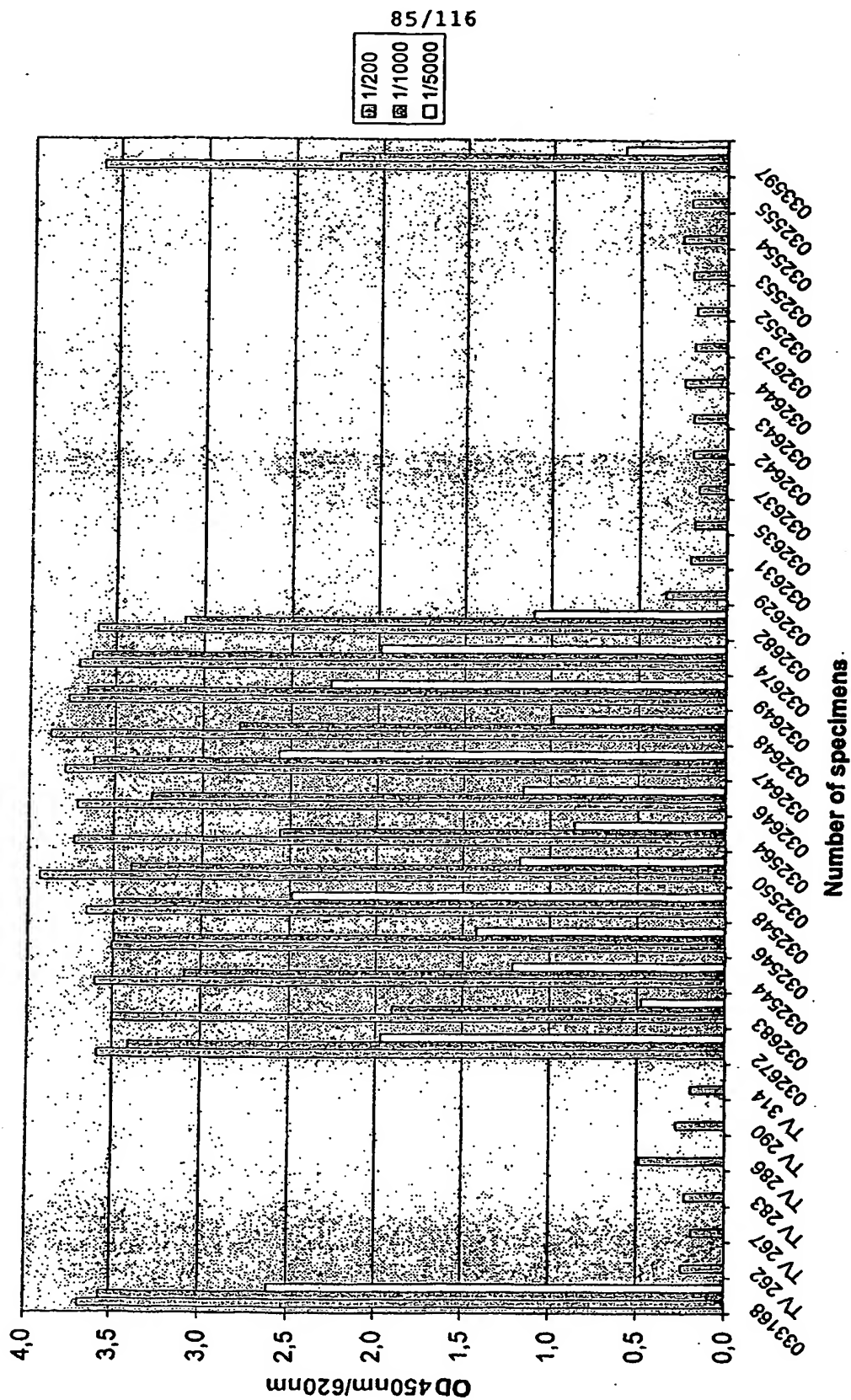


FIGURE 15

SRAS serology: Double Epitope Technique (First set)

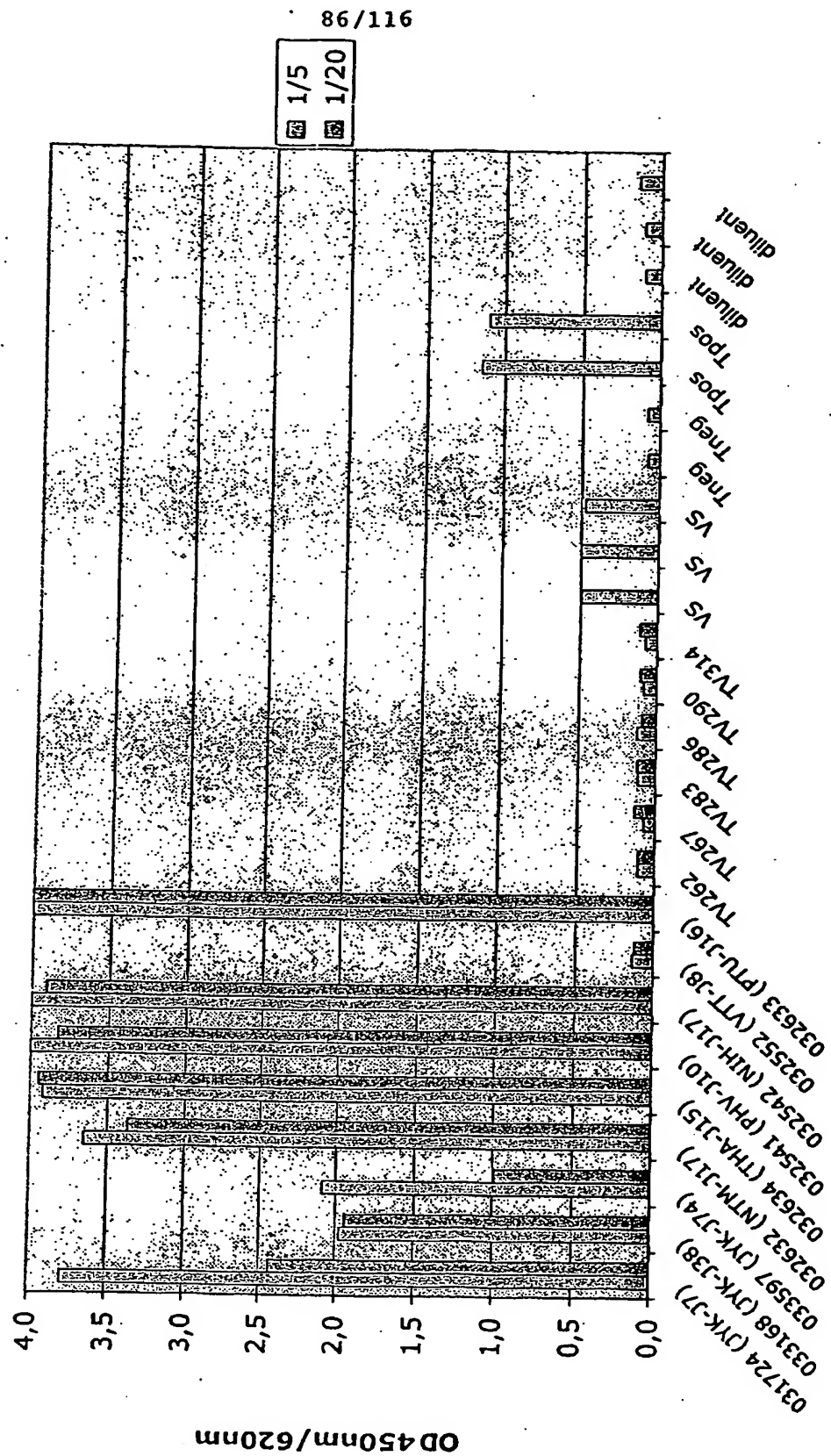


FIGURE 16

[illegible]

FIGURE 17

mAb assay on SRAS lysates

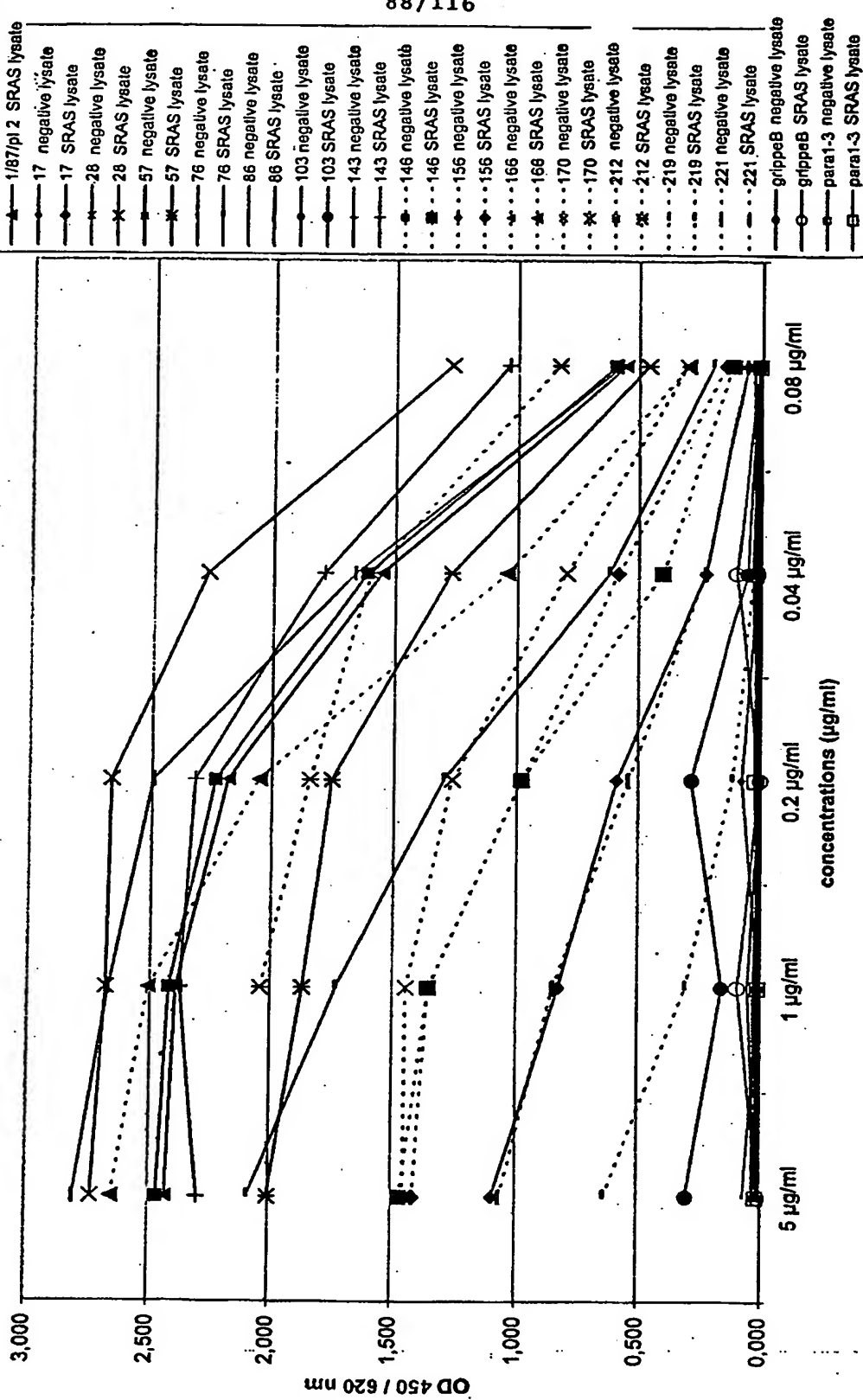


FIGURE 18

mAb assay on HCoV-229E lysates

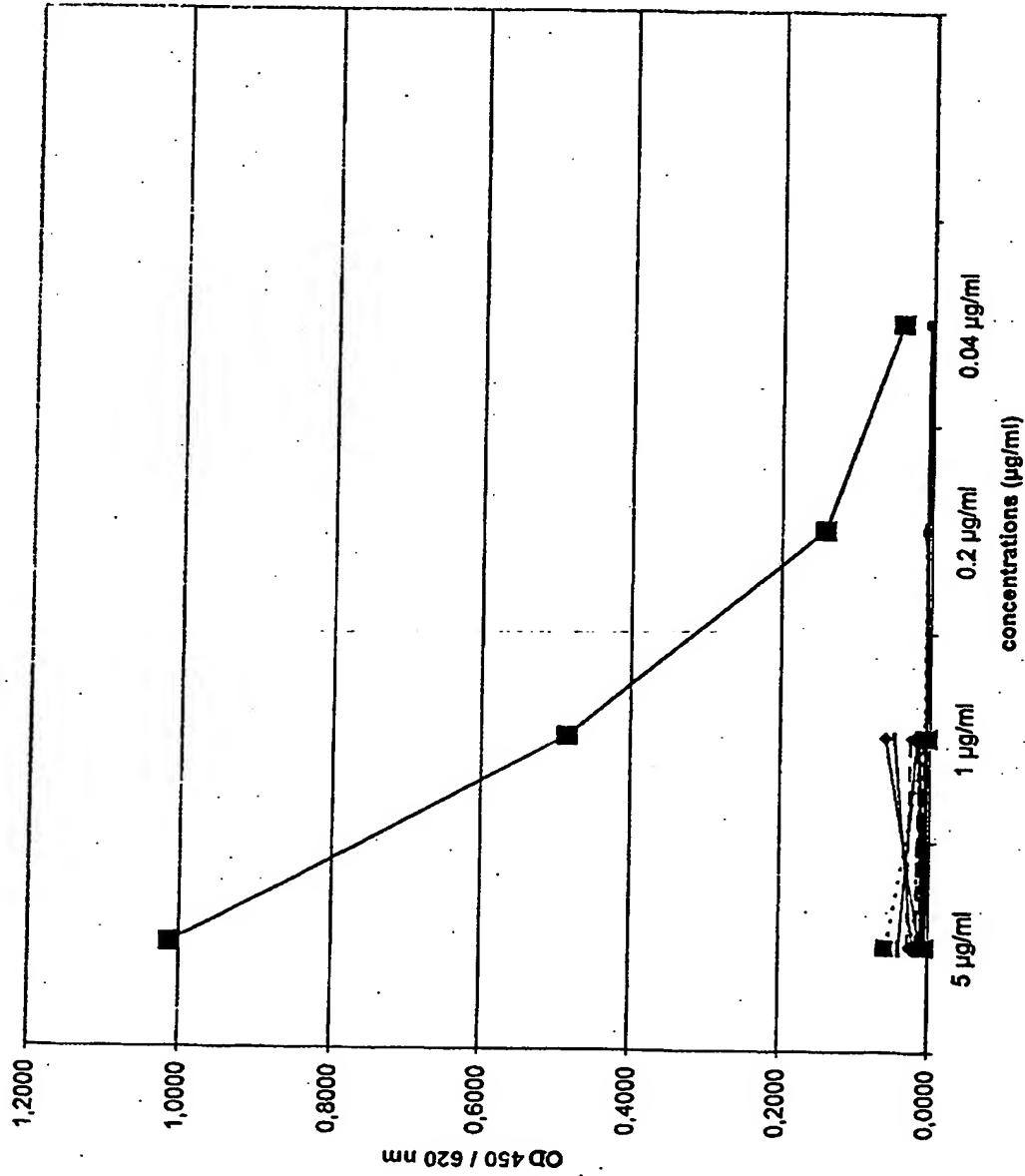


FIGURE 19

- 1/87 negative lysate
- 1/87 lysat 229E
- 5-11H.6 negative lysate
- 5-11H.6 lysat 229E
- 17 lysat negative lysate
- 17 lysat 229E
- 28 negative lysate
- 28 lysat 229E
- 57 negative lysate
- 57 lysat 229E
- 76 negative lysate
- 76 lysat 229E
- 86 negative lysate
- 86 lysat 229E
- 103 negative lysate
- 103 lysat 229E
- 143 negative lysate
- 143 lysat 229E
- 146 negative lysate
- 146 lysat 229E
- 156 negative lysate
- 156 lysat 229E
- 166 negative lysate
- 166 lysat 229E
- 170 negative lysate
- 170 lysat 229E
- 212 negative lysate
- 212 lysat 229E
- 219 negative lysate
- 219 lysat 229E
- 221 negative lysate
- 221 lysat 229E
- grippeB negative lysate
- grippeB lysat 229E
- para1-3 negative lysate
- para1-3 lysat 229E

90/116

#para1-3
#grippeB
#221
#219
#212
#170
#166
#156
#146
#143
#103
#86
#76
#57
#28
#17
1/87

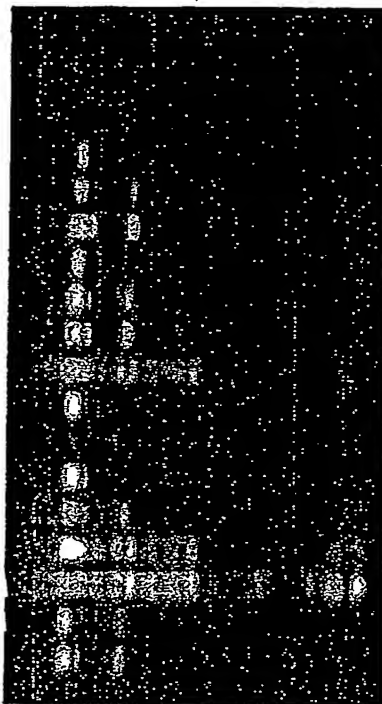


FIGURE 20

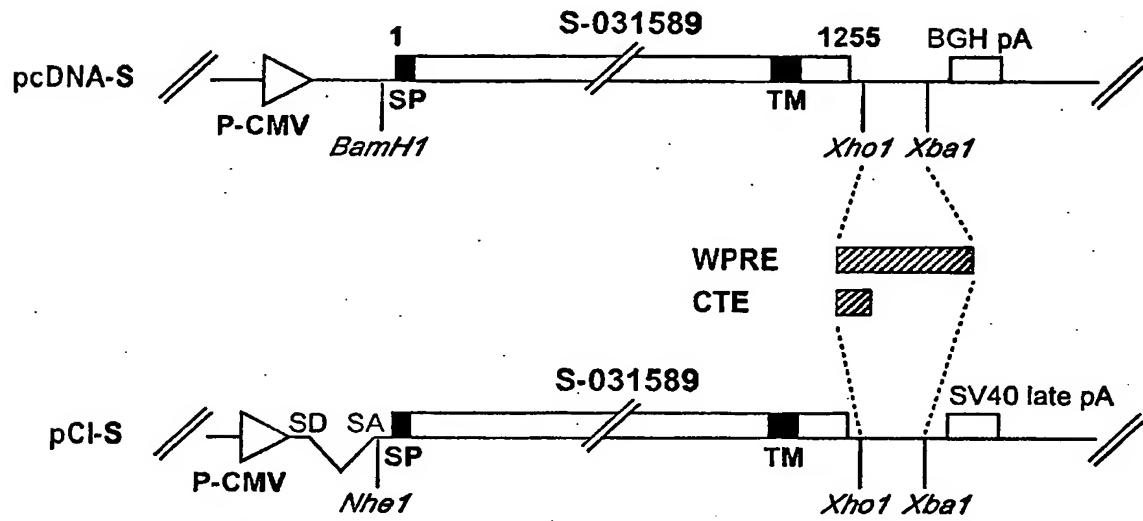


FIGURE 21

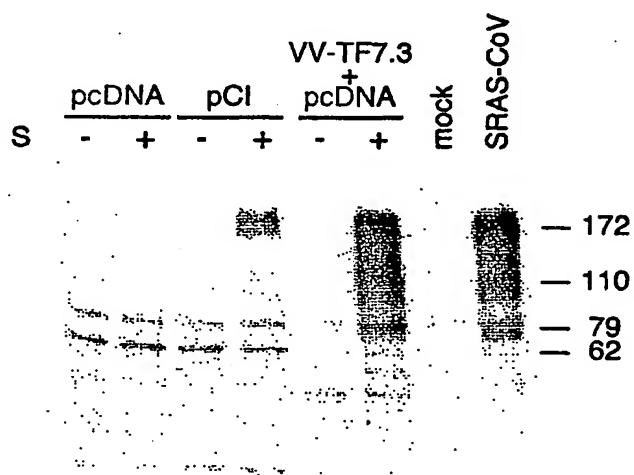
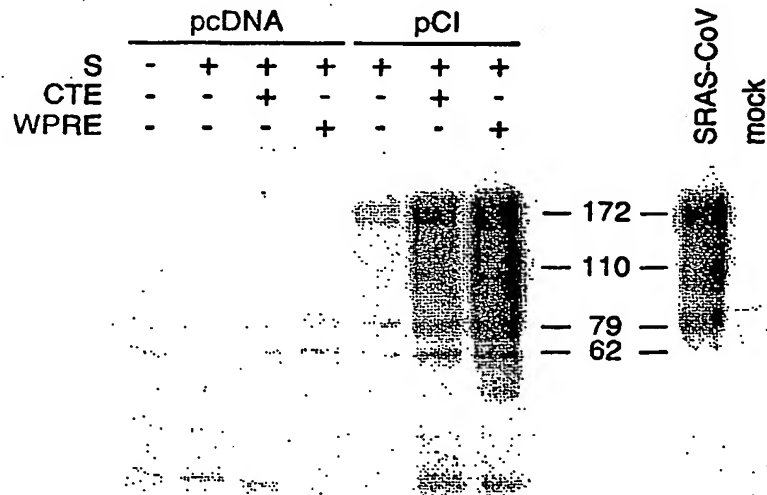


FIGURE 22

A.



B.

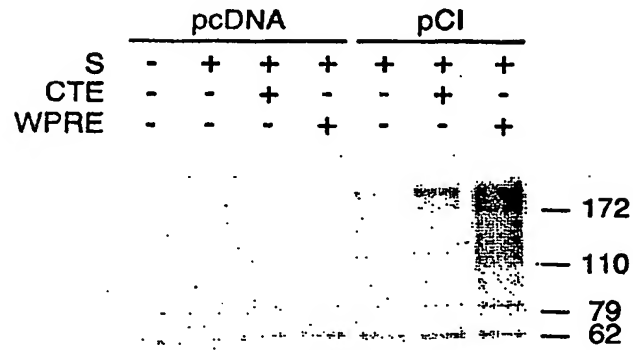


FIGURE 23

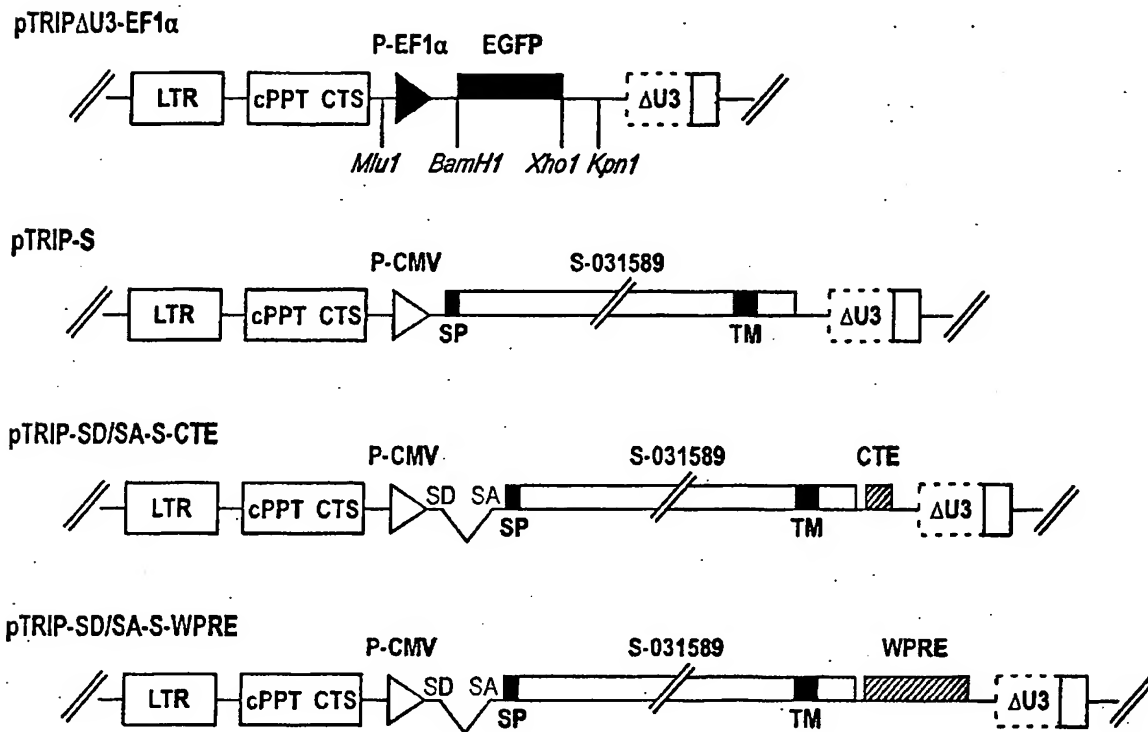


FIGURE 24

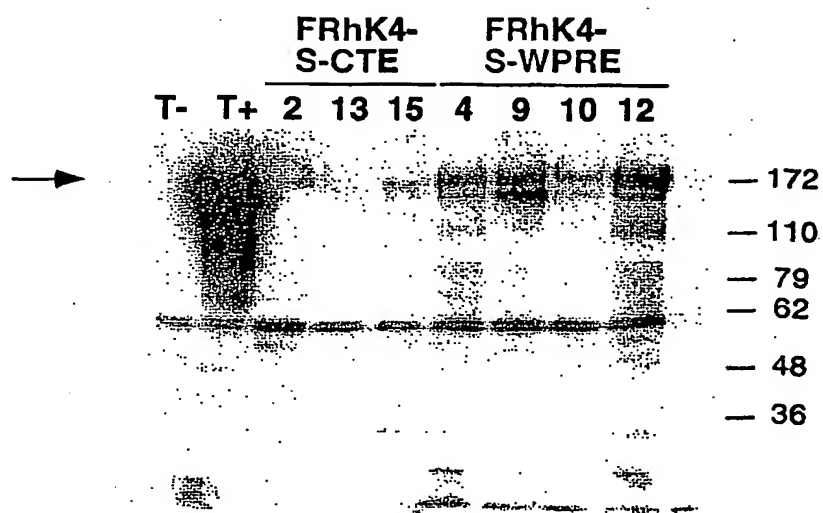


FIGURE 25

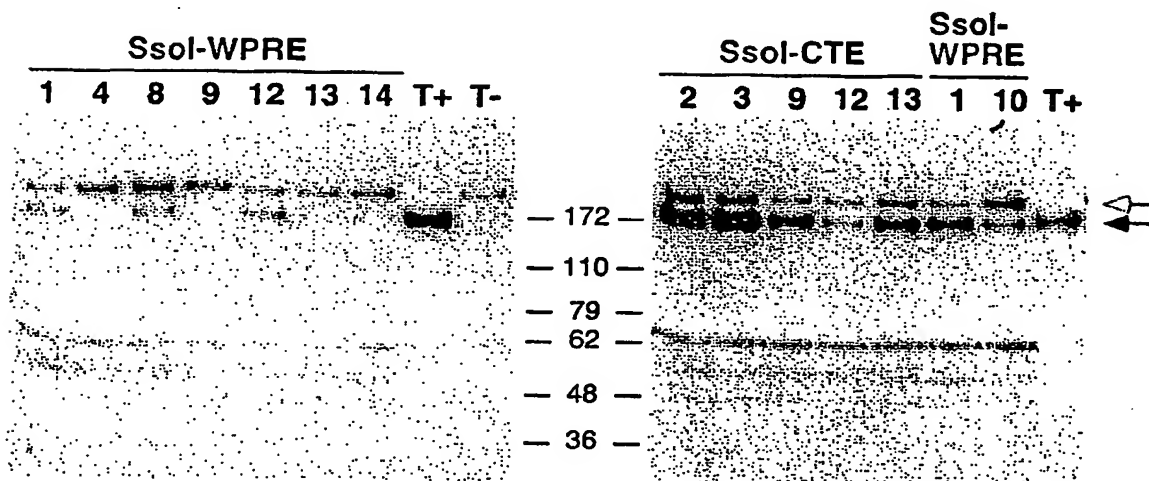


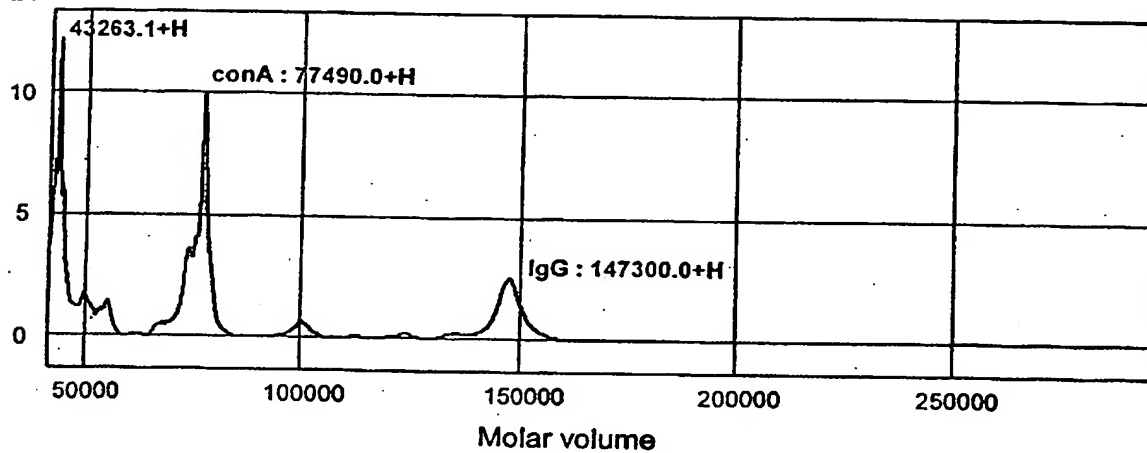
FIGURE 26

97/116

A.



B.



C.

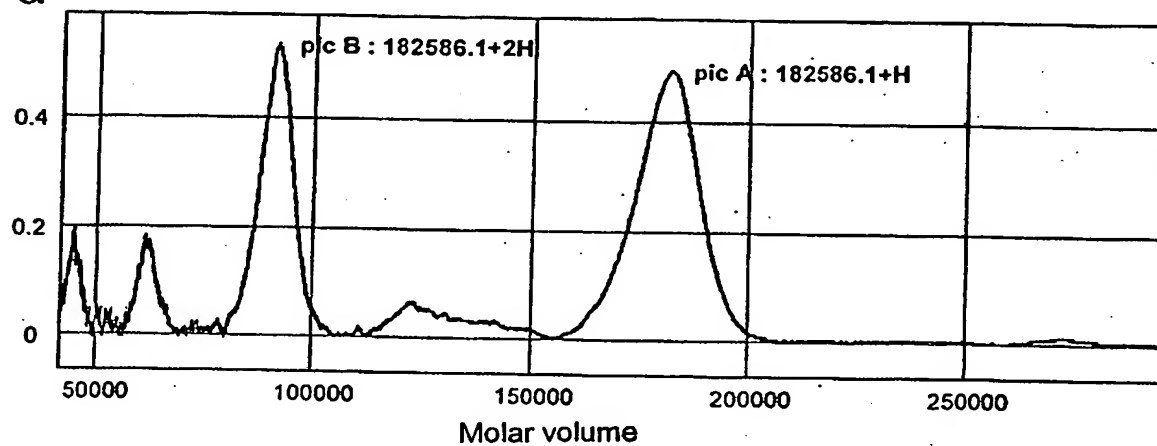


FIGURE 27 A-C

D.

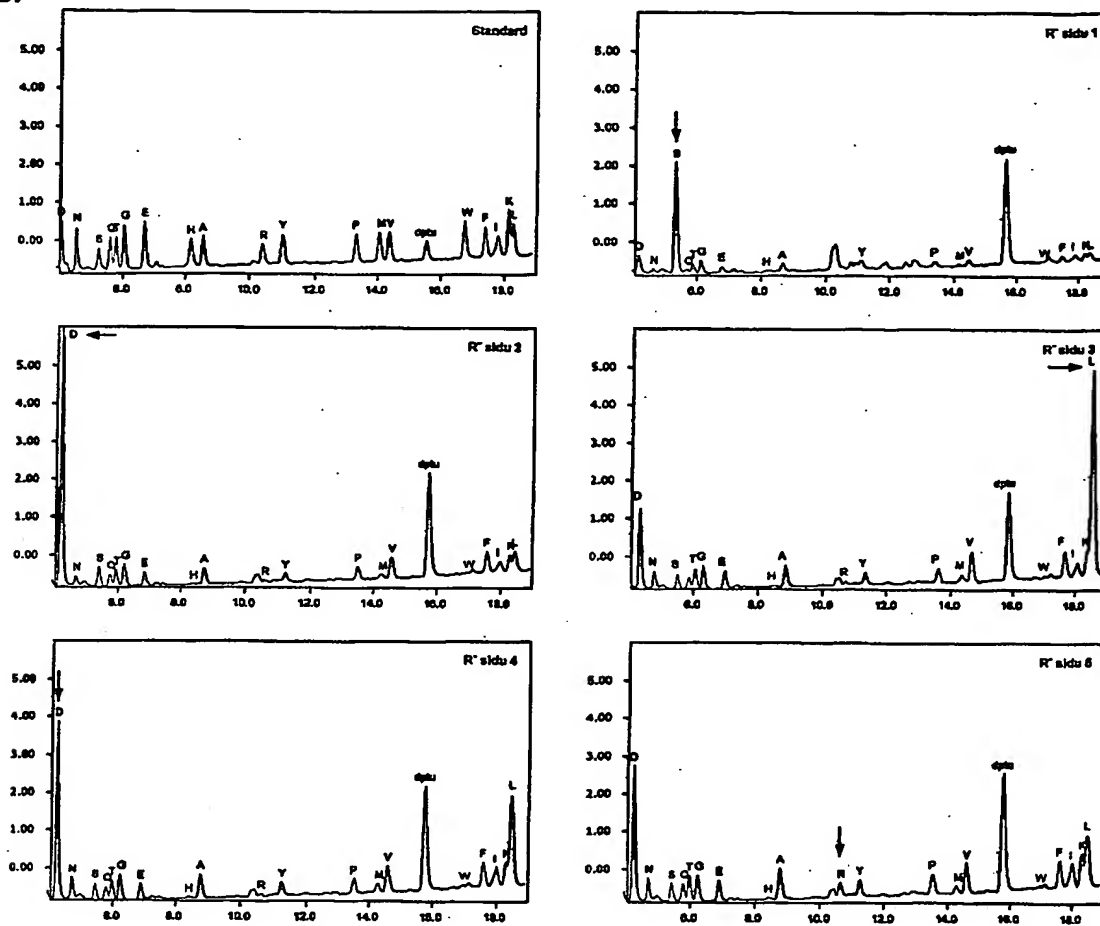
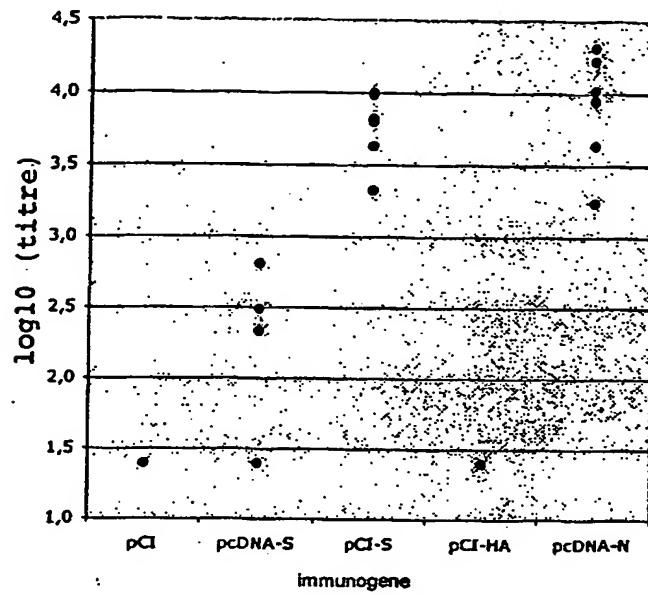


FIGURE 27 D

A.



B.

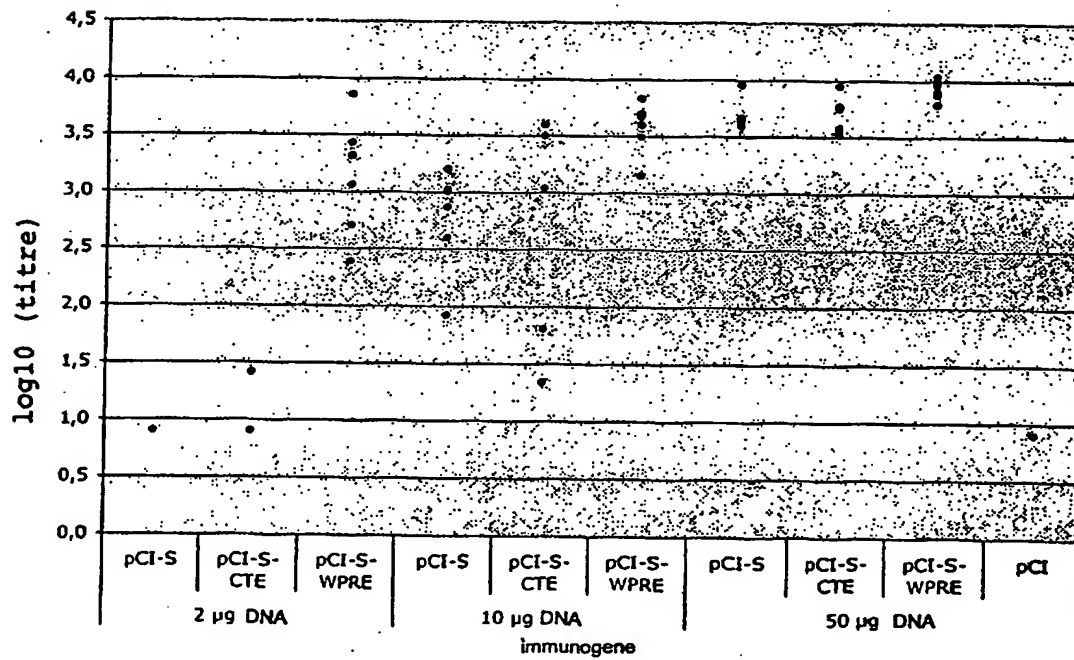


FIGURE 28

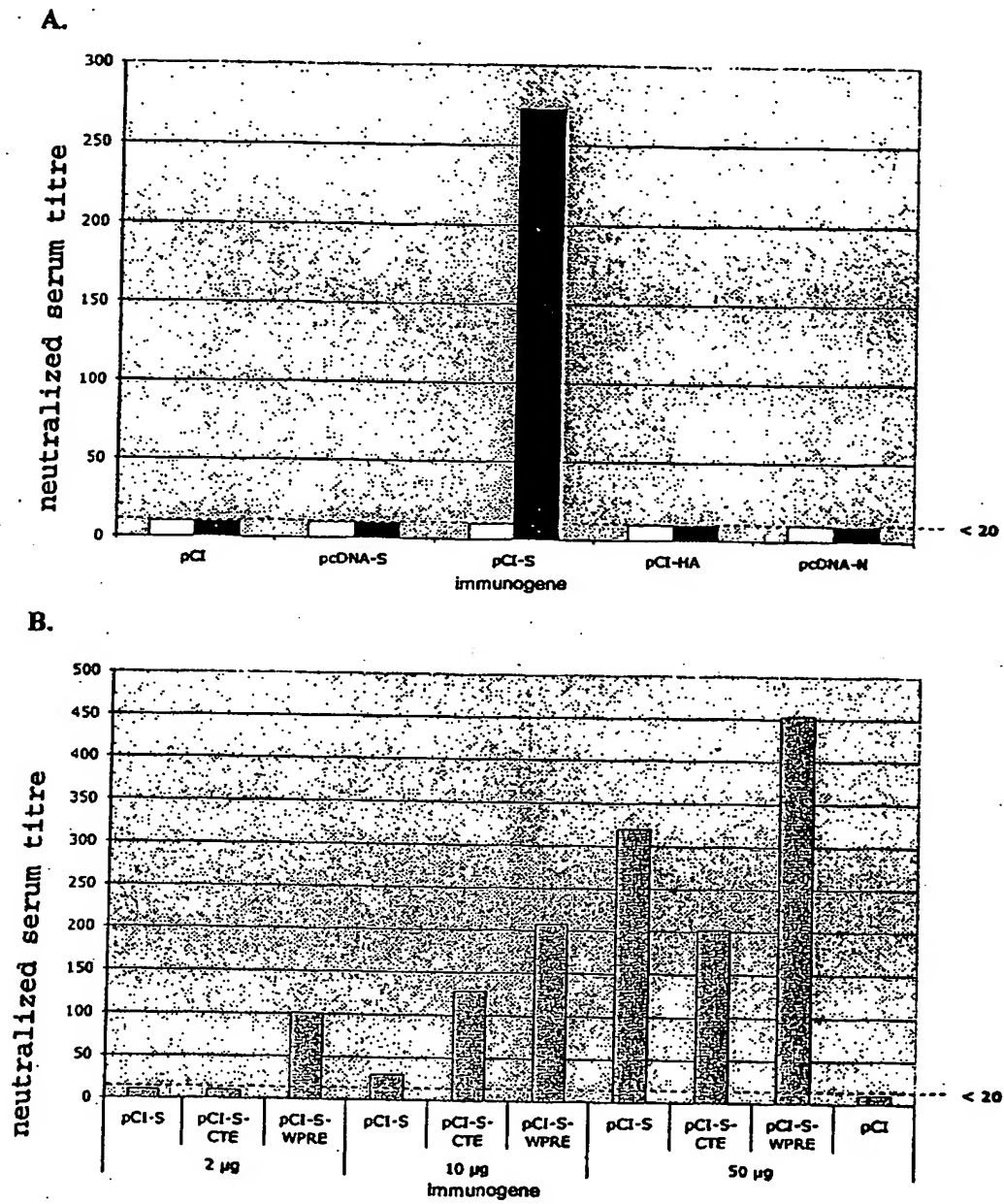


FIGURE 29

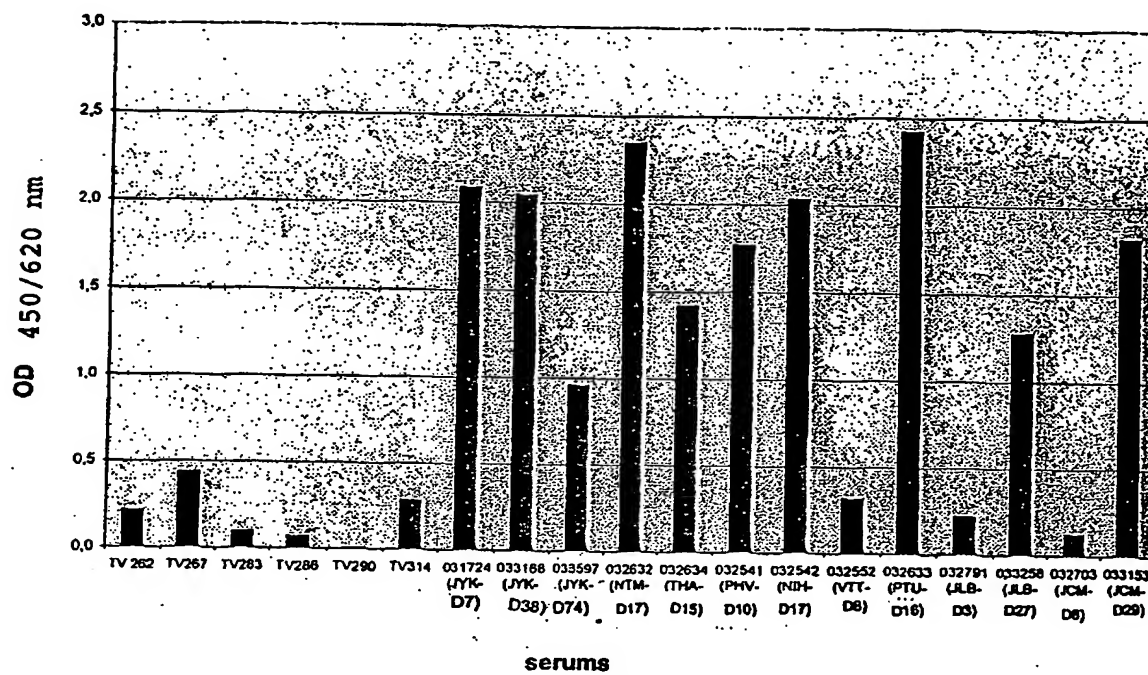


FIGURE 30:

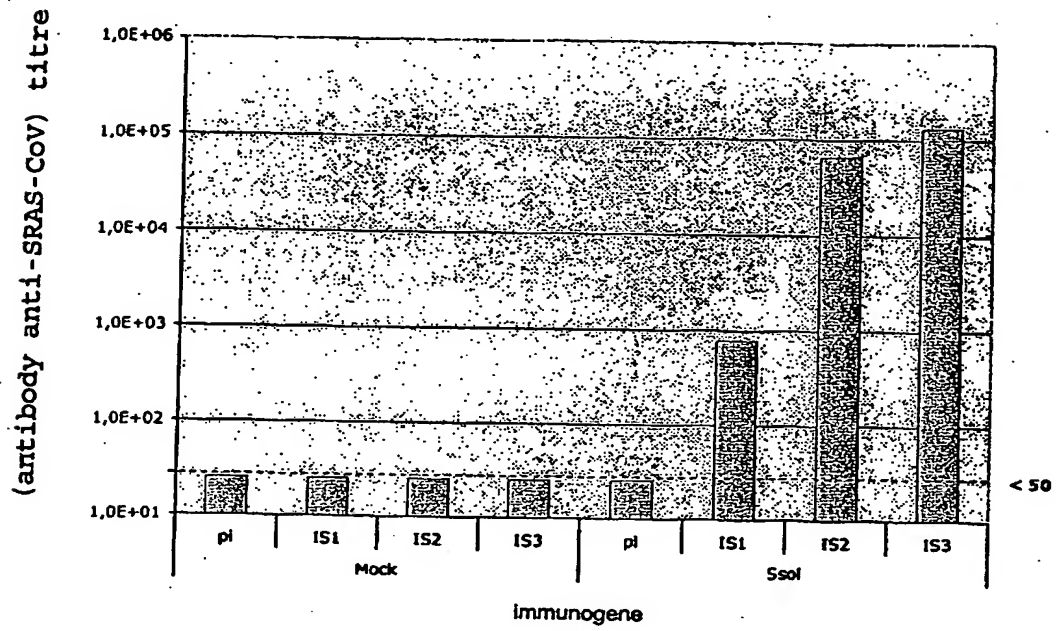


FIGURE 31

I-3059 S-040530	1	CTCTTCTGGA AAAAGGTAGGCTTATCATTAGAGAGAAACAACAGAGTTGTGGTTTCAAGTG
I-3059 S-040530	61 1	ATATTCTTGTTAACAACATAACGAACATGTTTATTTTCTTATTATTCTTACTCTCACTA GG"T"C"C""""C""C""C"GC"G"C""G"C""C"G"C"
I-3059 S-040530	121 44	GTGGTAGTGACCTTGACCGGTGCACCACTTTTGATGATGTTCAAGCTCCTAATTACACTC "C""C""C""""G""""""""""C""C""C""C""G""G""C""C""C""""C"
I-3059 S-040530	181 104	AACATACTT_CATCTATGAGGGGGGTTTACTATCCTGATGAAATTTTGTAGATCAGACACT "G""C""CAG"G"_"C""C""C""C""G""""C""C""C""C""G""C""C""C""GAGC""C""C"
I-3059 S-040530	240 163	CTTTATTTAACTCAGGATTTATTTCTTCCATTTTATTCTAATGTTACAGGGTTTCATACT "G""CC"G""C""""CC"G""C""G""C""C""CAGC""C""G""C""C""C""C""C"
I-3059 S-040530	300 223	ATTAATCATACGTTTGGCAACCTGTCTACACCTTTTAAGGATGGTATTTATTTTGTGCGC "C""C""C""C""C""C""""C""G""C""C""C""C""C""C""C""C""C""C""C""C"
I-3059 S-040530	360 283	ACAGAGAAATCAAATGTTGTCCGTGGTGGGTTTGTGGTTCTACCATGAACAACAAGTCA "C""""GAGC""C""G""G""G""C""""G""C""CAGC""""""""""AGC
I-3059 S-040530	420 343	CAGTCGGTGATTATTATTAAACAATTCTACTAATGTTGTTATACGAGCATGTAACCTTGAA ""AGC""""C""C""C""""CAGC""C""C""G""G""C""G""C""C""C""C""C""G
I-3059 S-040530	480 403	TTGTGTGACAACCTTTCTTTGCTGTTTCTAAACCCATGGGTACACAGACACATACTATG C""C""C""""C""C""C""C""C""G""C""C""C""C""C""C""C""C""C""C""C""C"
I-3059 S-040530	540 463	ATATTCGATAATGCATTTAATTGCACCTTCGAGTACATATCTGATGCCTTTTCGCTTGAT "C""""C""C""C""C""C""C""C""C""C""C""C""C""C""CAGC""C""C""CAGC""G""C"
I-3059 S-040530	600 523	GTTCAGAAAAGTCAGGTAATTTTAAACACTTACGAGAGTTTGTGTTTAAAAATAAAGAT "GAGC"G""AGC""C""C""C""G""C""G""G""C""C""C""C""C""G""C""G""C"
I-3059 S-040530	660 583	GGGTTTCTCTATGTTTATAAGGCTATCAACCTATAGATGTAGTTTCGTGATCTACCTTCT "C""C""G""C""G""C""C""C""C""C""C""C""C""G""C""C""C""G""GA"A""C""G""CAGC
I-3059 S-040530	720 643	GGTTTTAAACACTTTGAAACCTATTTTAAAGTTGCCTCTTGGTATTAAACATTACAAATTTT "C""C""C""CC""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C"
I-3059 S-040530	780 703	AGAGCCATTCTTACAGCCTTTTACCTGCTCAAGACATTGGGGCACGTGAGCTGCAGCC C"G""C""C""G""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C"
I-3059 S-040530	840 763	TATTTTGTGCTGCTATTTAAAGCCAACTACATTTATGCTCAAGTATGATGAAAATGGTACA "C""C""G""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C"
I-3059 S-040530	900 823	ATCACAGATGCTGTTGATTGTTCTCAAATCCACTTGCTGAACTCAAATGCTCTGTTAAG ""C"
I-3059 S-040530	960 883	AGCTTTGAGATTGACAAAGGAATTTACCAGACCTCTAATTTAGGGTTGTTCCCTCAGGA ""C"
I-3059 S-040530	1020 943	GATGTTGTGAGATTCCCTAATATTACAACTTGCTGCTCTTTGGAGAGGTTTTTAATGCT ""C""C""C""G""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C"
I-3059 S-040530	1080 1003	ACTAAATTCCTTCTGTCTATGCATGGGAGAGAAAAAAATTTCTAATTGTGTTGCTGAT ""C""G""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C"
I-3059 S-040530	1140 1063	TACTCTGTGCTCTACAACCTCAACATTTTTCACCTTTAAGTGCTATGGCGTTTCTGCC ""AGC""C"
I-3059 S-040530	1200 1123	ACTAAGTTGAATGATCTTTGCTTCTCCAATGTCTATGCAGATTCTTTGTAGTCAAGGGA "C""C""C""C""C""C""G""C""C""C""C""C""C""C""C""C""C""C""C""C""C"
I-3059 S-040530	1260 1183	GATGATGTAAGACAAATAGCGCCAGGACAAACTGGTGTTATTGCTGATTATAATTATAAA "C""C""C""G""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C""C"

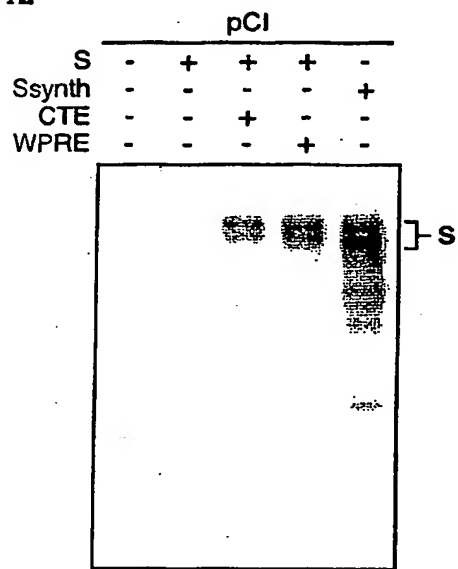
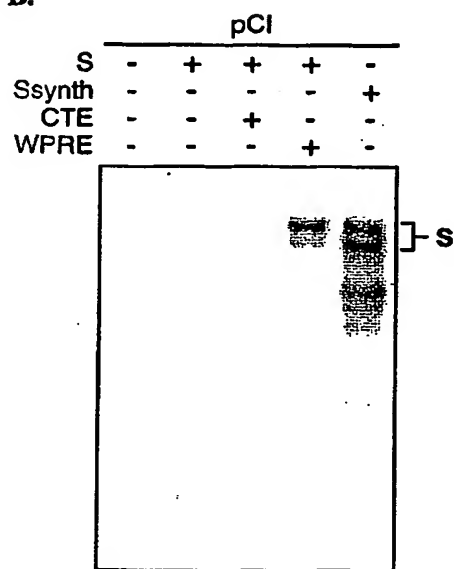
FIGURE 32.1

[illegible]

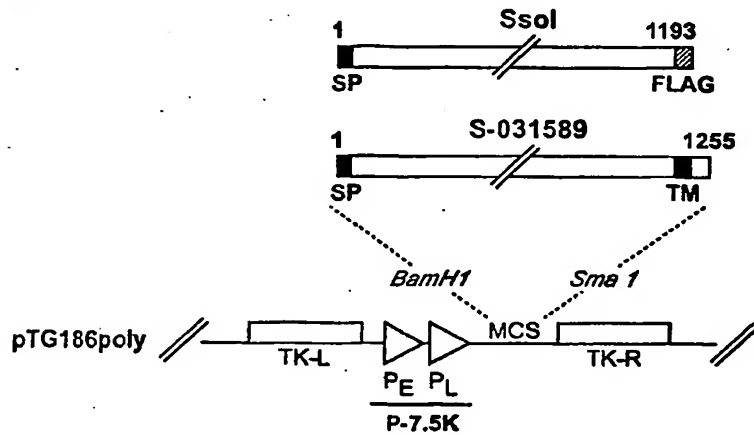
FIGURE 32.2

I-3059	2697	GGTGCTGGCGCTGCTCTTCAAATACCTTTTGCTATGCAAATGGCATATAGGTTCAATGGC
S-040530	2620	"A"C"A"C"C"G"G"C"C"C"C"C"C"C"C"C"C"C"C"C"C"C"
I-3059	2757	ATTGGAGTTACCCAAAATGTTCTCTATGAGAACCAAAACAAATCGCCAACCAATTTAAC
S-040530	2680	"C"C"G"G"G"C"G"G"C"C"C"C"C"C"C"C"C"C"C"C"C"C"
I-3059	2817	AAGGCGATTAGTCAAATTCAGAATCACTTACAACAACATCAACTGCATTGGGCAAGCTG
S-040530	2740	"C"C"C"C"G"C"G"GAGC"G"C"C"C"C"C"C"C"C"C"
I-3059	2877	CAAGACGTTGTTAACCAGAATGCTCAAGCATTAAACACACTTGTAAACAACCTTAGCTCT
S-040530	2800	"G"G"G"G"C"C"C"C"C"C"C"C"C"C"C"C"C"C"C"
I-3059	2937	AATTTTGGTGCAATTTCAAGTGTGCTAAATGATATCCTTTCGCGACTTGATAAAGTCGAG
S-040530	2860	"C"C"C"C"C"CAGCTC"C"C"C"C"C"C"C"C"C"C"
I-3059	2997	GCGGAGGTACAAATTGACAGGCTAATTACAGGCAGACTTCAAAGCCTTCAAACCTATGTA
S-040530	2920	"C"A"G"G"C"C"C"C"C"C"C"C"C"C"C"C"C"
I-3059	3057	ACACAACACTAATCAGGGCTGCTGAAATCAGGGCTTCTGCTAATCTTGCTGCTACTAAA
S-040530	2980	"C"G"G"G"G"A"C"C"G"C"C"C"CAGC"C"C"C"C"C"C"
I-3059	3117	ATGCTGAGTGTGTTCTTGGACAATCAAAAAGAGTTGACTTTTGTGGAAGGGCTACCAC
S-040530	3040	"AGC"C"G"G"C"GAGC"G"G"G"C"C"C"C"C"
I-3059	3177	CTTATGTCCTTCCACAAGCAGCCCCGATGGTGTGTTCTTCTACATGTCACGTATGTG
S-040530	3100	"G"AG"C"G"C"C"C"C"C"C"C"C"C"
I-3059	3237	CCATCCCAGGAGAGGAACCTCACCACAGCGCCAGCAATTGTCATGAAGGCAAAGCATAC
S-040530	3160	"TAG"C"C"C"C"C"C"C"C"C"C"C"
I-3059	3297	TTCCCTCGTGAAGGTGTTTTTGTGTTTAATGGCACTTCTGGTTTATTACAGAGGAAC
S-040530	3220	"C"G"G"C"G"C"C"C"C"C"CAGC"C"C"C"C"
I-3059	3357	TTCTTTTCTCCACAATAATTACTACAGACAATACATTGTCTCAGGAAATTGTGATGTC
S-040530	3280	"CAGC"C"G"C"C"C"C"C"C"C"C"C"
I-3059	3417	GTTATTGGCATCATTAACAACACAGTTTATGATCCTCTGCAACCTGAGCTTGACTCATTC
S-040530	3340	"G"C"C"C"C"C"C"C"C"C"C"
I-3059	3477	AAAGAAGAGCTGGACAAGTACTTCAAAAATCATACATCACCAGATGTTGATCTTGGGAGC
S-040530	3400	"G"G"C"C"C"C"C"C"C"C"
I-3059	3537	ATTCAGGCATTAAACGCTTCTGTCGTAACATTCAAAAAGAAATTGACCGCCTCAATGAG
S-040530	3460	"CAGC"C"C"C"G"G"C"G"G"C"C"C"
I-3059	3597	GTCGCTAAAAATTTAAATGAATCACTCATTGACCTTCAAGAATTGGGAAAATATGAGCAA
S-040530	3520	"G"C"G"CC"G"C"GAGC"G"C"C"C"
I-3059	3657	TATATTAAATGGCCTTGGTATGTTTGGCTCGGCTTCATTGCTGGACTAATTGCCATCGTC
S-040530	3580	"C"C"G"C"C"C"C"G"C"C"
I-3059	3717	ATGGTTACAATCTTGCTTGTGTCATGACTAGTTGTGCAAGTTGCTCAAGGGTGCATGC
S-040530	3640	"G"C"C"C"G"C"C"C"C"
I-3059	3777	TCTTGTGGTTCTTGCTGCAAGTTTGATGAGGATGACTCTGAGCCAGTTCTCAAGGGTGTG
S-040530	3700	AGC"CAGC"C"C"C"C"AGC"C"C"C"
I-3059	3837	AAATTACATTACATAAACGAACCTTATGGATTTGTTTATGAGATTTTACTCTTGGAT
S-040530	3760	"GC"G"C"C"G" "CGA"
I-3059	3897	CAATTACTGCACAGCCAGTAAAAATTGACAATGCTTCTCCTGCAAGT
S-040530		

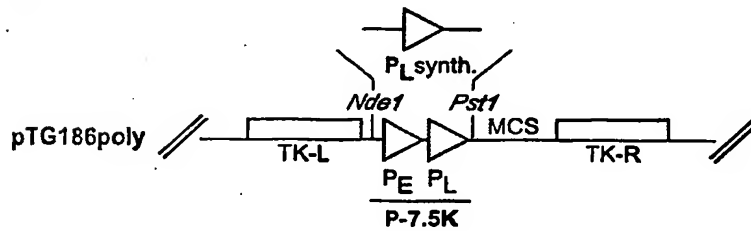
FIGURE 32.3

A.**B.****FIGURE 33**

A.



B.



C.

CATATG AGC [T]₂₀GGCATATAAATA GACTC GGCGCGCC AT CTGCAG
*Nde*I promoteur 480 *Asc*I *Pst*I

FIGURE 34 A-C

D.

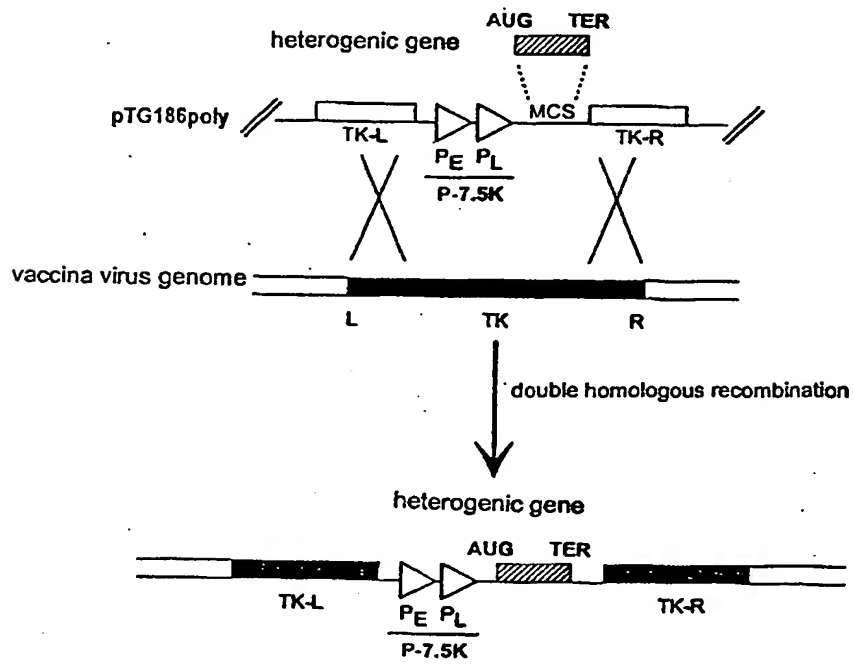
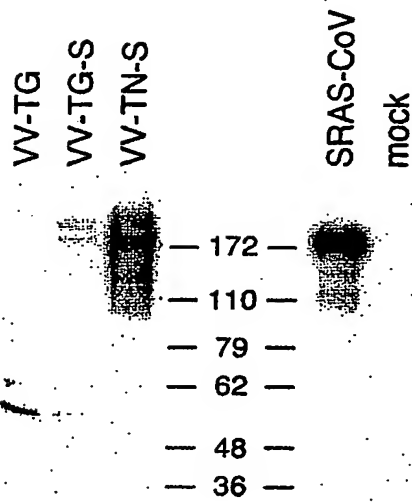


FIGURE 34 D

A.



B.

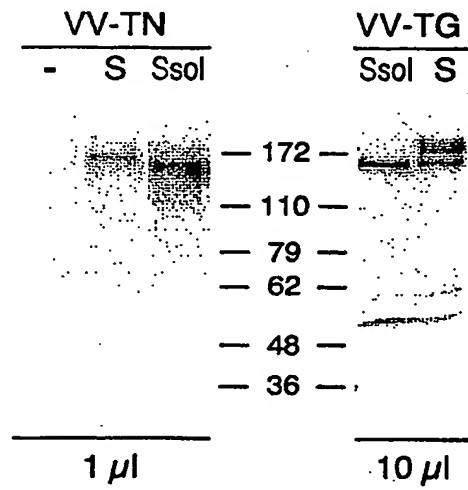
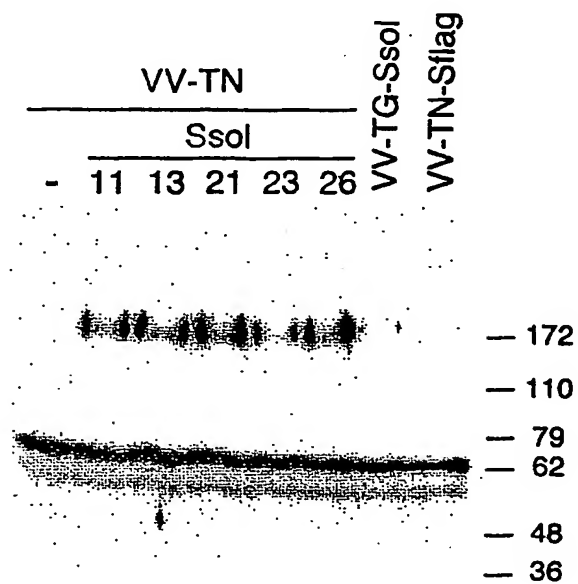


FIGURE 35

A.



B.

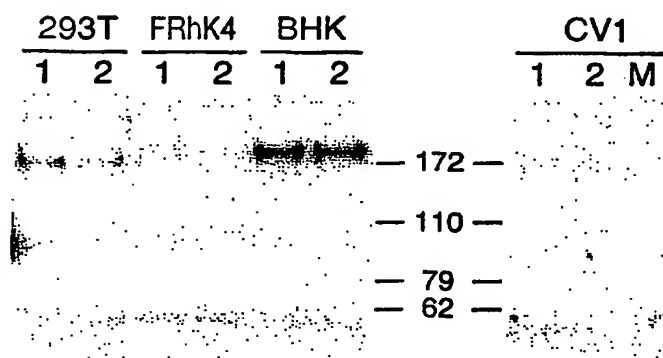


FIGURE 36

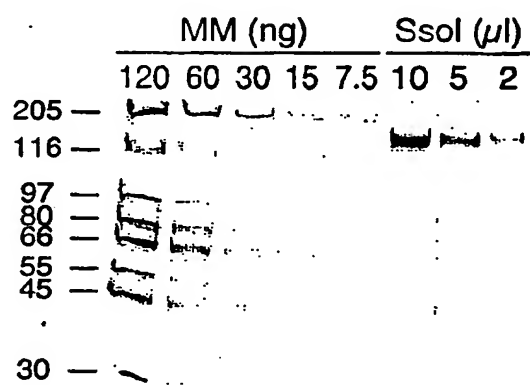


FIGURE 37

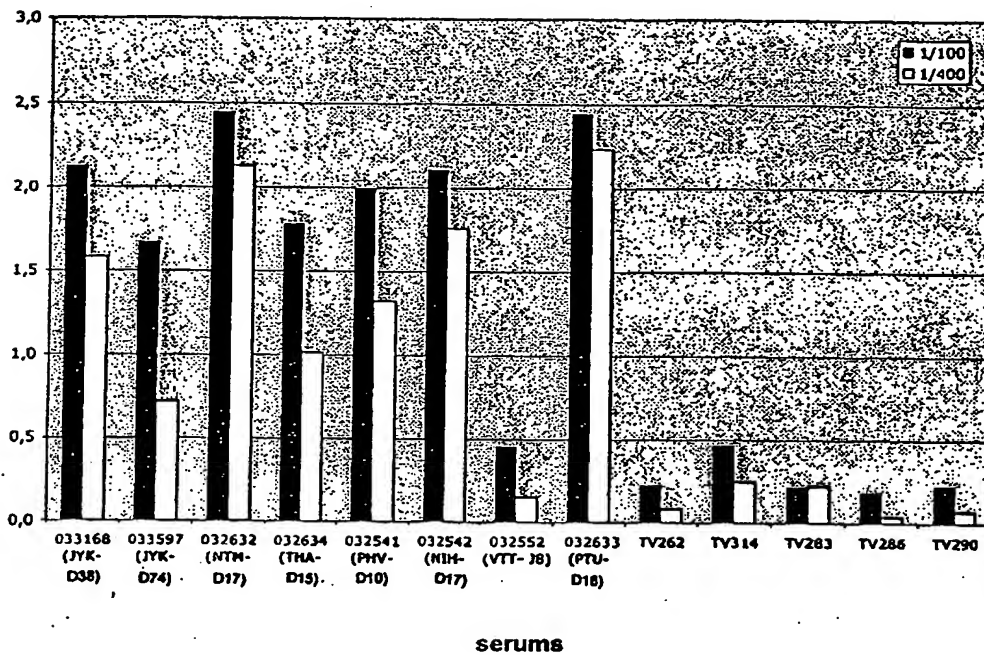
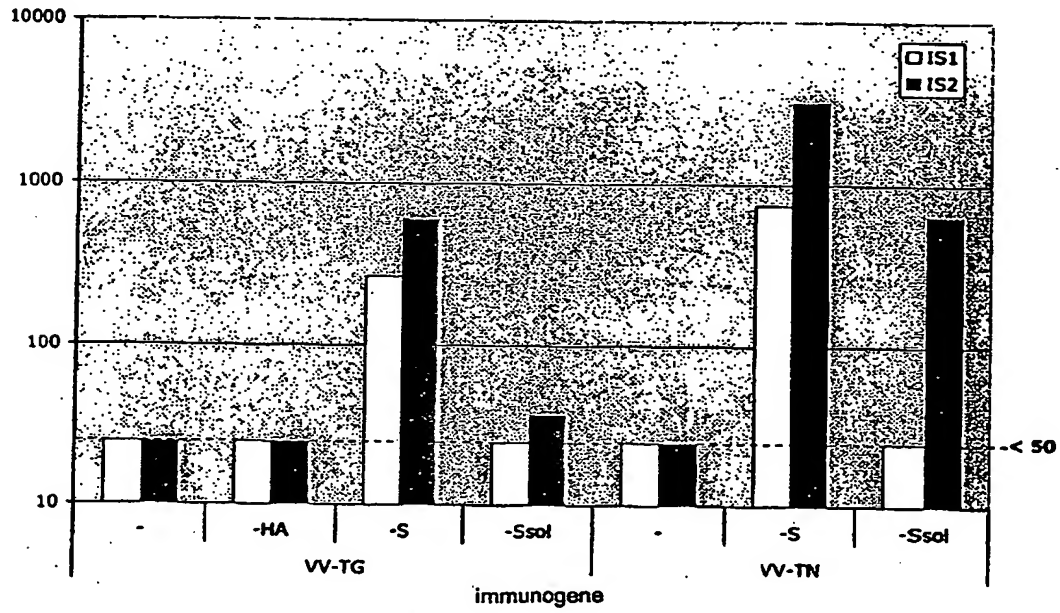


FIGURE 38

A.



B.

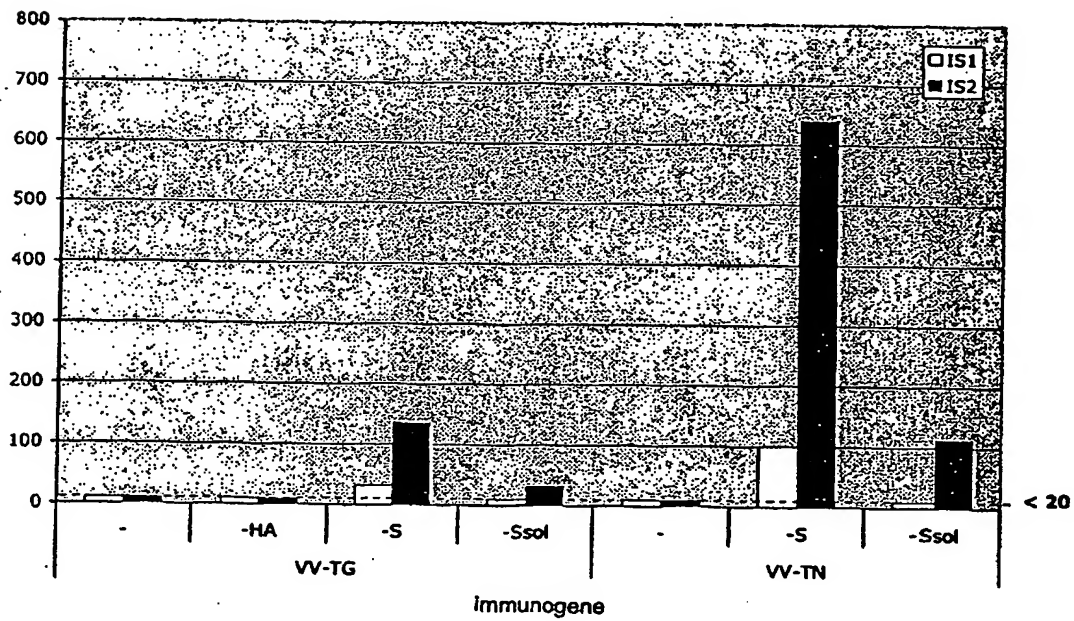


FIGURE 39

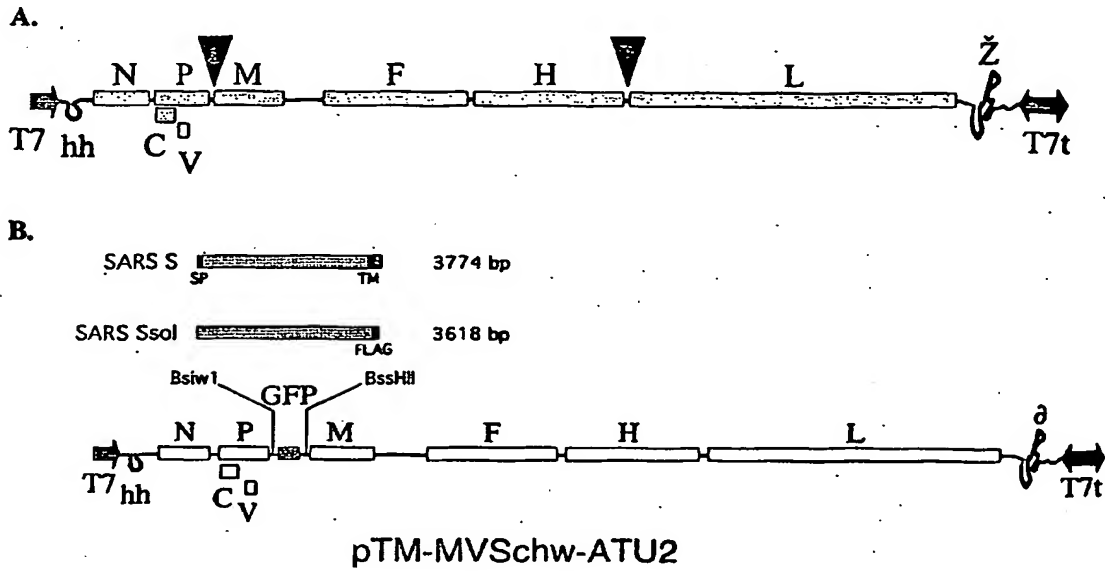


FIGURE 40

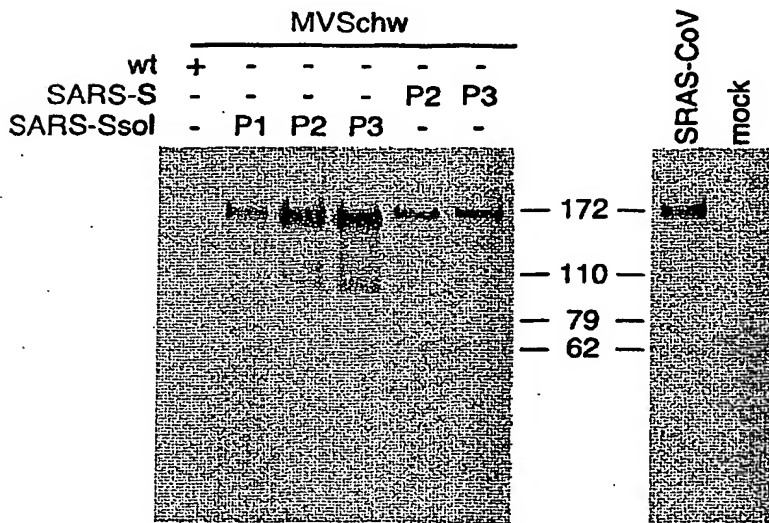


FIGURE 41

115/116

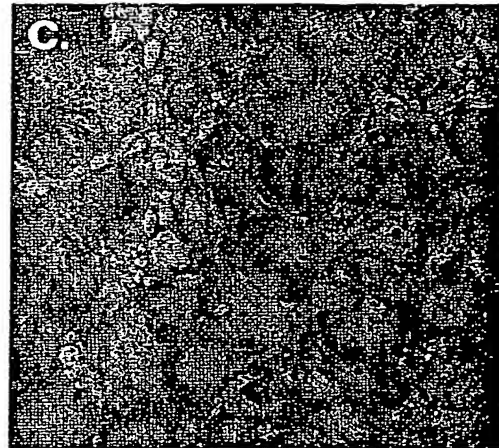
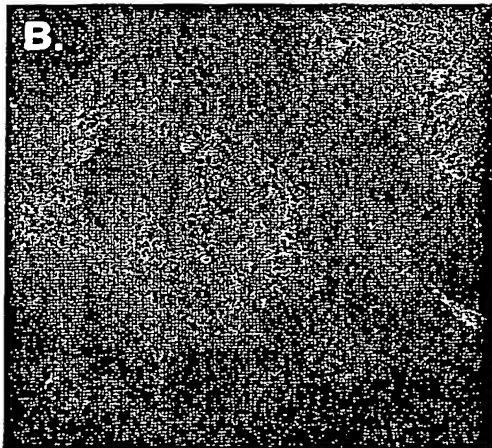
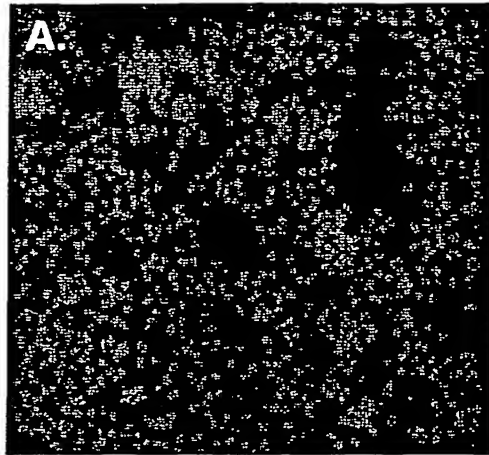


FIGURE 42

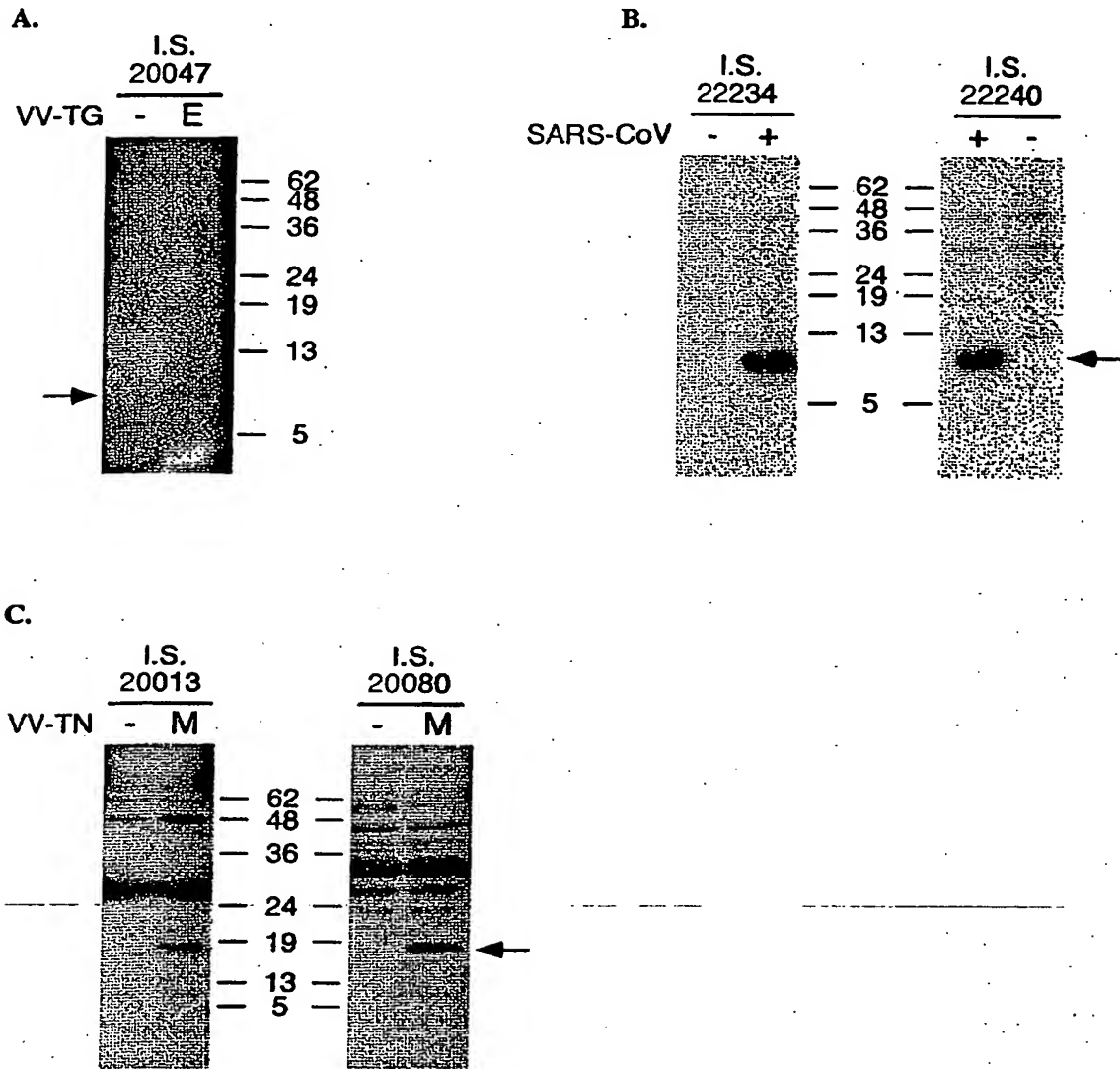


FIGURE 43

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☒ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☒ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.